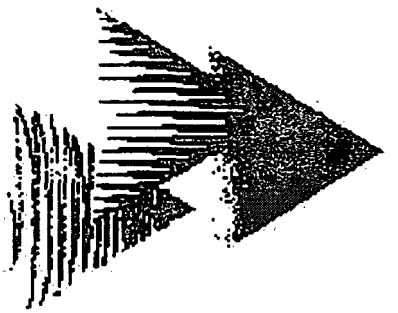

PROMISING PRACTICES IN CTS

March 1999

Alberta
EDUCATION
Curriculum Standards Branch

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★To be connected toll free outside Edmonton, dial 310-0000.

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Send Us Your Ideas

We would appreciate receiving your recommendations and ideas for subsequent versions of this document. In particular, we would like to know:

- how the programs, partnerships and/or resources profiled in this document have helped you to implement CTS

_____

_____

_____

- about the promising practices undertaken in your school and community to implement CTS, so these might be shared in subsequent versions of this document

_____

_____

_____

- about specific challenges associated with implementing CTS, so these might be addressed in subsequent versions of this document

_____

_____

_____

Additional Comments

_____

_____

_____

_____

_____

Can we contact you for further information regarding the ideas you have shared?

Your Name: _____	Telephone: _____
School/Organization: _____	Fax: _____

Please return completed form to the Career and Technology Studies Unit, Curriculum Standards Branch, Alberta Education, Devonian Building, 5th Floor East Tower, 11160 Jasper Avenue, Edmonton, Alberta, Canada, T5K 0L2. Telephone: 780–422–4872*; Fax: 780–422–0576.

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Introduction

Career and Technology Studies (CTS) is a provincially authorized complementary program designed for Alberta's secondary school students. In September 1997, CTS replaced all junior and senior high school practical arts courses—former courses in business education, home economics, industrial arts and vocational education.

As a program of choice, CTS enables junior and senior high school students to:

- investigate career options and make effective career choices
- learn to use technology—tools and processes—effectively and efficiently
- make connections with learnings developed in other subject areas
- prepare for entry into the workplace or further learning.

Strands and Courses

There are 22 strands in CTS. Each strand is composed of a group of 1-credit courses (previously referred to as modules) designed to support positive career and occupational opportunities for students. In general, strands relate to selected industry sectors, including goods-producing industries, such as agriculture, manufacturing and construction; and service-producing industries, such as business, health and finance. Learnings within any particular strand may involve similar tools and technologies, clientele, working environments, products and processes.

Levels of Learning

The 1-credit courses within each CTS strand are grouped across levels—introductory, intermediate and advanced—rather than grades. The levels structure provides junior and senior high school students with multiple entry points into a common curriculum that consists of:

- introductory level courses that build daily living skills and form the basis for further learning. Introductory courses are for students who have no previous experience in the strand
- intermediate level courses that build on the competencies developed at the introductory level. These courses provide a broader perspective and help students recognize the wide range of related career opportunities available within the strand
- advanced level courses that refine expertise and prepare students for entry into the workplace or a related post-secondary program.

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Program Planning

Multiple-credit offerings in CTS are planned at the school/system level, by combining 1-credit courses that best suit the needs of students, the school/school system and the community. The curriculum structure permits schools and teachers to combine 1-credit CTS courses:

- within and across strands
- within and across levels
- with other non-CTS core and optional courses.

Reporting Achievement

Student achievement is reported to students and parents in accordance with local policy. At the junior high school level, student achievement in CTS is not reported to Alberta Education. At the senior high school level, student achievement in CTS is reported to Alberta Education on the basis of individual 1-credit courses; each 1-credit course is reported by strand and course number, for inclusion on the Alberta High School Transcript of Achievement and Detailed Profile. The information conveyed through single-credit reporting is useful in communicating to post-secondary institutions and prospective employers the nature of the competencies developed by CTS students.

Program Highlights

Those involved in implementing CTS programs at school and jurisdictional levels have identified numerous program strengths. Clients have expressed a high level of support for:

- the range of learning opportunities and flexibility offered by CTS
- credentialling and articulation opportunities available to CTS students
- the *CTS Communication Network Update*, as a communication tool
- the *Guides to Standards and Implementation*, as means of communicating curriculum and assessment standards for each of the 22 CTS strands
- access to curriculum documents and other program information through the Internet.

Responding to the Challenge

Questions frequently raised by those implementing CTS strands and courses generally relate to:

- transitions between junior and senior high school
- opportunities for enhancing instructional expertise in CTS
- the development and sharing of Student Learning Guides and other support materials
- how to keep up with ongoing change in information and communication technology
- the implementation of CTS in rural communities.

Promising Practices in CTS has been developed in response to these and other questions raised regarding the implementation of CTS programs. The successful programs and partnerships profiled in this document provide examples of how teachers, schools and school systems are implementing specific CTS strands and courses. Though useful in providing information about

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the status of a range of implementation initiatives, the document is not exhaustive. We believe there are many other innovative and effective practices taking place across the province.

The CTS Team will continue to gather examples of how teachers, schools and school systems are addressing various challenges associated with implementing CTS programs. The team would appreciate learning about the initiatives taken in your school and community to implement CTS; e.g., successful courses, effective partnerships, recommended practices, so that these might be shared in future versions of this document.

A consent form for sharing CTS implementation initiatives taken in your school and community is provided in Appendix 2.

Thank you for your interest in sharing professional practices and for your support of the CTS program.

Articles in this Document

The articles that follow in this document, with one exception, are taken from previously published issues of the *CTS Communication Network Update*. The particular issue is indicated by the parenthetical date that follows each article heading. Some articles have been revised slightly to include current information. Most of the articles, however, need to be read with the parenthetical date in mind, as the text reflects the currency of information at that particular time. For current information on an initiative outlined in an article, contact the appropriate individual or organization referenced in the sidebar of the article.

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CTS General

Successful Programs and Partnerships

CTS Renovations at Spruce Grove Composite High School Exceed Expectations
(November 1998)

For more information, or for a tour of the CTS facilities, contact:
Laurie Hawley
CTS Department Head
Spruce Grove Composite High School
Telephone: 780-962-0800
Fax: 780-962-9555
Email: <lhawley@psd70.ab.ca>

Renovations were recently completed to CTS facilities at Spruce Grove Composite High School. As a result of the renovations, all CTS labs are now located on the main floor of the school, in close proximity to one another. The renovations included provisions for:

- an Information Centre with over 80 computers—though designed primarily for delivering Information Processing in a team-teaching environment, a portion of this facility is also made available for use by students and teachers in other classes
- a CTS resource room—a facility that has been very well received, as it offers a space close to all labs where CTS teachers can meet to discuss their programs and related issues.

Other enhancements to the CTS learning environment, made possible through renovations at Spruce Grove Composite High School, include:

- a mini-lab of computers for use in Mechanics and Fabrication/ Construction courses
- computer numerical control (CNC) equipment for Fabrication/ Construction courses
- a video production suite for the Communications lab
- a new Design Electronics lab, with computers for teaching design and drafting and with learning stations for electronics and robotics.

The newly renovated areas have many windows and doors, a feature that has enhanced the visibility of CTS courses within the school. CTS enrollments at Spruce Grove Composite High School have increased—in part because students are able to see what their peers are doing and become interested in taking other CTS courses. Enhanced visibility and the close proximity of labs have also created an open atmosphere for staff—teachers are more readily able to collaborate with one another.

CTS Teacher Training at NAIT
(June 1998)

NAIT offers teacher training opportunities in six CTS strands—Communication Technology, Construction Technologies, Design Studies, Electro-Technologies, Fabrication Studies and Mechanics. Through a transfer agreement with the University of Alberta, teachers can receive credit for technical preparation taken at NAIT.

Successful completion of one semester, or three strands, as outlined below, leads to a "Minor" status at the University of Alberta. Successful completion of all six strands, plus evidence of eight weeks of work experience in at least one CTS strand, leads to "CTS Major" status and a NAIT Career and Technology Studies Certificate. Each strand involves approximately 160 hours of lectures, modularized instruction, laboratory demonstrations and hands-on shop experience.

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Fall Semester
(August 31 – December 18, 1998)

- Mechanics
- Electro-Technologies
- Construction Technologies

Winter Semester
(January 4 – April 23, 1999)

- Fabrication Studies
- Design Studies
- Communication Technology

(November 1998)

For more information on the CTS Conference or on future course offerings, contact:
Alan Kabotoff
CTS Program Coordinator
NAIT
Telephone: 780–471–8657
Fax: 780–471–7765
Email: <alank@nait.ab.ca>

NAIT also recently provided a backdrop for national and international interests in the CTS program. Educational representatives from Prince Edward Island and Neuquén, Alberta's sister province in Argentina, toured NAIT's facilities to view the CTS connection. Both delegations were very appreciative of the opportunity and are looking forward to receiving NAIT's assistance in enhancing their own programs.

NAIT is pleased to be working closely with the CTS Council to bring about another successful CTS Conference in April 1999. NAIT will be sharing its expertise and facilities through tours, demonstrations and informative workshops. Hope to see you there!

CTS at the University of Alberta
(November 1998)

For more information, contact:
George Buck
Associate Professor
Department of Secondary Education
University of Alberta
Telephone: 780–492–3572
Fax: 780–492–9402
Email: <george.buck@ualberta.ca>

Numerous changes have been approved for the teacher preparation program in CTS at the University of Alberta. The new program, offered through the Department of Secondary Education, offers four major areas of study—Business and Technology, Technology Education, Human Ecology and Resources. Each major provides preparation for teaching in a number of CTS strands, thus increasing students' versatility and likely their employability.
Students who major in Technology Education will obtain course content for six of the strands—Communication Technology, Construction Technologies, Design Studies, Electro-Technologies, Fabrication Studies and Mechanics—by completing a special CTS Technology Certificate at NAIT. After completing the certificate program at NAIT, these students will be eligible to enter the second year of their B. Ed. program at the University of Alberta, and complete remaining degree requirements there.

Individuals possessing an approved journeyman or red seal certificate in a relevant trade area will be awarded advance standing in the B. Ed. program and can complete all of their degree requirements at the University of Alberta.

The changes noted above, as well as provisions for offering four minor areas of study in CTS, will be incorporated into the next university calendar. Other CTS initiatives in progress at the Department of Secondary Education include plans for:

- a home page for the CTS teacher preparation program on the university web site
- a new training facility for CTS teachers in the Education North building that will have contiguous areas for many strands
- a summer institute that would offer CTS courses at both the senior undergraduate and graduate levels.

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CTS at the University of Lethbridge
(February 1997)

For more information, contact:
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Faculty of Education
University of Lethbridge
4401 University Drive
Lethbridge, AB, Canada
T1K 3M4
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Fax: 403–329–2252
Email: <gerald.mcconaghy@uleth.ca>

The University of Lethbridge offers CTS courses for undergraduate and graduate students. Undergraduates are able to complete a teaching major in CTS (Business Focus). Since September 1997, undergraduate students have been able to complete a CTS minor in:

- Agriculture
- Business Education
- Communications Technology
- Community Health
- Computer Technologies
- Natural Resources.

Providing opportunities for undergraduate students and practicing teachers to broaden their educational backgrounds with CTS content will enhance employment opportunities and offer the teaching profession curriculum integration experience.

ATA Specialist Council: CTS Council
(January 1998)

On August 1, 1997 the merged Career and Technology Studies Council came into official existence. Since then, the interim executive has undertaken a number of initiatives, including the development of a mission statement, goals and logo; first revisions to the policy handbook; investigation of a new structure for regionals; and planning for its annual conference.

Mission Statement

Recognizing the diversity of Career and Technology Studies, we represent and support the ongoing professional needs of our members and promote the CTS program.

The merged CTS Council includes four areas of specialization—strand clusters—each with its own vice-president and directors to address strand-specific conference and professional development needs. CTS strands within each of the four areas of specialization include:

Business Education
- Enterprise and Innovation
- Financial Management
- Information Processing
- Legal Studies
- Logistics
- Management and Marketing
- Tourism Studies
- Career Transitions

Home Economics
- Community Health
- Cosmetology Studies
- Fashion Studies
- Foods
- Career Transitions

Industrial Education
- Communication Technology
- Construction Technologies
- Design Studies
- Electro-Technologies
- Fabrication Studies
- Mechanics
- Career Transitions

Resources
- Agriculture
- Energy and Mines
- Forestry
- Wildlife
- Career Transitions

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(November 1998)

For more information about the CTS Council, contact:
Jim Letts
President, CTS Council
Telephone: 780–963–2255
Fax: 780–963–6722
Email: <jletts@psd70.ab.ca>

Major initiatives planned by the CTS Council for the 1998–1999 school year included:

- planning and delivering November workshops for CTS teachers in the Edmonton and Calgary areas
- developing an effective and user-friendly web site
- compiling a list of key contacts for each of the 22 CTS strands, appropriate for use in all regions of the province
- promoting the use of professional development funds by council members
- planning and delivering the annual CTS Conference, to be held in April 1999 at the Edmonton Inn.

Articulation with the Apprenticeship Trades
(November 1998)

For more information on existing articulation agreements, contact:
Apprenticeship and Industry Training Division
Alberta Advanced Education and Career Development
Telephone: 780–427–4601
Fax: 780–422–5319
Email: <aitinfo@aecd.gov.ab.ca>

Articulation agreements have now been established with six of the Alberta Apprenticeship Training Programs—Automotive Service Technician, Cabinetmaker, Carpenter, Cook, Hairstylist and Welder. As outlined in the chart below, students who complete required CTS courses and successfully challenge appropriate theory and practical examinations in these trades may qualify for:

- a portion of the trade's in-school training program, and/or
- on-the-job time credit within the trade.

Apprenticeship Trade	*Length of Program*	*Number of Required CTS 1-Credit Courses*	*Credit for Formal Training*	*On-the-Job Time Credit*
Automotive Service Technician	4 years	25	1st Period	Nil
		35	1st & 2nd Period	525 hrs
Cabinetmaker	4 years	30	Nil	408 hrs
Carpenter	4 years	25	1st Period	Nil
Cook	3 years	17	1st Period	Nil
		30	1st & 2nd Period	450 hrs
Hairstylist	2 years	35	1st Period	525 hrs
		55	1st & 2nd Period	700 hrs
Welder	3 years	25	1st Period	Nil

Details regarding each of the articulation agreements are provided in Appendix 5 of the 1998 *Career & Technology Studies Manual for Administrators, Counsellors and Teachers*, and through the CTS section of the Alberta Education web site—click on What's New and Upcoming Events, then CTS Program Update.

Other trade areas being considered for potential articulation with CTS strands include Auto Body Technician, Electrician, Electronic Technician and Landscape Gardener.

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Alberta Technology Preparation Consortium (*June 1998*)

For more information, contact:
Patti Henley
Central Alberta Technology Preparation Coordinator
Telephone: 403–342–3732
Fax: 403–347–8190
Email: <phenley@techprep.ab.ca>

For more information about the portfolio partner project or work experience database, contact:
Eugene Kulmatycki
School-to-Work Coordinator
Telephone: 403–342–3740
Fax: 403–347–8190
Email: <ekulmatycki@techprep.ab.ca>

A decision was reached in March 1998 to form an Alberta Technology Preparation Consortium to enable school districts across the province to become involved in helping students develop practical school-to-career skills.

Precedent for the provincial consortium was established through the model for school-to-career transitions developed by the Central Alberta Technology Preparation Consortium, consisting of Red Deer School District No. 104, Red Deer Catholic Regional Division No. 39, Wolf Creek School Division No. 72 and Chinook's Edge School Division No. 73. Red Deer College and Olds College have also been partners in the program. Vital components of this program include:

- applied academics in mathematics, science, social studies and English, whereby real-life examples are incorporated into curriculum
- work site learning opportunities that enhance the curriculum and give students a first-hand look at the skills and attitudes needed by business and industry
- articulation among educational systems to assist students in making a smooth transition from one level to another without experiencing delays, duplication of courses or loss of credit.

Recent initiatives of the Central Alberta Technology Preparation Consortium include an "employability skills portfolio partner project"—encouraging businesses in central Alberta to request that students present portfolios when seeking jobs—and a "work experience database"—a valuable tool for students who are searching for possible work experience placements. The database can be accessed through the consortium web site at <http://www.techprep.ab.ca>. Limited interaction with the database can be achieved through the use of the password <public>.

Alberta Learning Information Service (*June 1998*)

The Alberta Learning Information Service web site can be visited at <http://www.alberta-learning.ab.ca> or accessed from the Alberta Education home page.

For more information about the ALIS web site, contact:
Karen Machura
Public Affairs Officer
Communications
Alberta Advanced Education and Career Development
Telephone: 780–422–4495
Fax: 780–422–1263
Email: <karen.machura@aecd.gov.ab.ca>

The Alberta Learning Information Service (ALIS) web site provides a wealth of useful information about post-secondary education, and career and training options in Alberta. The ALIS web site is designed to help learners:

- explore career choices
- find information on education and training programs
- link to learning institutions
- find information about student finance and scholarships
- learn about transfer credits among Alberta institutions
- apply online for admission to participating learning institutions.

Through ALIS, students and teachers can also link to a number of career planning, job search and occupational resources, including:

- the Career Information Hotline
- the Career Shop—an electronic catalogue of materials
- job search information
- self-employment information
- occupational information—both federal, Job Futures, and provincial, OCCINFO.

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The ALIS web site is a joint effort of Alberta Advanced Education and Career Development, Alberta Education, the Alberta Council on Admissions and Transfer, publicly funded colleges and technical institutions, private accredited colleges, Alberta universities, the Council of Alberta University Students, Alberta College, and the Technical Institute Students' Executive Council.

TELUS Learning Connection
(June 1998)

The 2Learn web site can be visited at <http://www.2Learn.ca>.

For more information about the TELUS Learning Connection, contact:
Catherine Kullman
Team Leader
Telephone: 780–493–4816
Fax: 780–493–3115
Email: <catherine@2Learn.ca>

By now, many teachers are familiar with the TELUS Learning Connection, the team of five seconded teachers and 250 jurisdictional team leaders who have begun working with colleagues across Alberta to integrate Internet resources with curriculum. Their 2Learn web site is truly a site created by Alberta teachers for Alberta teachers.

Prime objectives of the project are to:

- compile a variety of web sites that Alberta teachers can access for useful curriculum links
- help teachers link the Internet to classroom projects and practices.

2Learn offers CTS teachers an opportunity to support one another and inform others of their good work through the Internet. The success of 2Learn depends upon everyone's interaction. As more of those involved in teaching CTS make use of and contribute to the site, a more complete collection of links to different strands and courses within the CTS curriculum will be compiled for all to use in lesson planning.

Alberta Advanced Education and Career Development
(November 1998)

The Alberta Advanced Education and Career Development web site can be visited at <http://www.aecd.gov.ab.ca/index.html>.

Statistics Canada conducts a monthly labour force survey of the population 15 years of age and older. This monthly survey is the primary source of information for statistics on employment and unemployment in Canada. Results of this survey are extremely timely, as estimates for a particular month are available within the first two weeks of the following month. Approximately 52 350 households and 97 000 respondents, representing Canada's 10 provinces, are surveyed each month. In Alberta, some 3775 households and 7000 respondents are surveyed each month.

Alberta Advanced Education and Career Development has provided a "snapshot" of this survey, highlighting information of particular relevance to youth. This snapshot, Labour Force & Youth, is provided in Appendix 1 of this document. Additional information regarding labour market conditions in Alberta is available through the Alberta Advanced Education and Career Development web site.

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Summer Leadership Seminar (*November 1998*)

For more information about the CTS '98 Summer Leadership Seminar, contact:
Louise Beermann
Southern Alberta Professional Development Consortium
Telephone: 403–381–5580
Fax: 403–381–5709
Email: <sapdc@uleth.ca>
OR
Yvonne Norton
Faculty of Education
University of Alberta
Telephone: 780–492–4209
Fax: 780–492–0390
Email: <yvonne.norton@ualberta.ca>

The fourth annual CTS Summer Leadership Seminar was held at Olds College on August 18–21, 1998. Over 300 teachers, administrators, counsellors and representatives of business, industry, post-secondary and government departments attended the seminar. Approximately 40% of the registrants were sponsored by their school or district. A significant number of the educators attending the seminar were new to CTS and/or the teaching profession.

The formal program included four plenary sessions and over 90 specialized sessions designed to meet the needs of the novice and experienced CTS teacher alike. Many of the specialized sessions provided opportunities for participants to obtain credentials necessary for offering selected CTS courses. In addition, there was ample opportunity for participants to review approved curriculum materials, screen videos and software, view displays of other goods and services sponsored by education partners, and network with colleagues.

The planning and delivery of the 1998 seminar was coordinated by the Southern Alberta Professional Development Consortium and the Continuing Professional Education Department, University of Alberta.

For more information about the '99 Summer Leadership Seminar, contact:
Pat Bidart
Olds College
Telephone: 403–556–8365
Fax: 403–556–4698
Email: <pbidart@admin.oldscollege.ab.ca>

A '99 Summer Leadership Seminar is scheduled for August 17–20 at Olds College. The '99 seminar is being planned by Olds College, and will provide professional development opportunities of particular interest to those involved in CTS, applied learning and career development.

Professional Development through the CTS Council (*June 1998*)

Further inquiries and applications for professional development funding should be forwarded to:
Mark Ladd
Professional Development Director
Telephone: 780–624–4221
Fax: 780–624–4048
Email: <laddm@prsd.ab.ca>

A main focus of the CTS Council has been to provide professional development opportunities for its members. To encourage professional development, the CTS Council has allocated funds for local and/or regional workshops. Any member or group of members may organize and receive funding for a workshop or program that is based on CTS courses or strands. Funding for professional development activities requires that:

- the program is planned by CTS Council members
- the program meets an identified need of CTS teachers
- program organizers attempt cost recovery with registration fees. To encourage professional development, however, the CTS Council will subsidize such events this year
- information be shared with members in other areas.

The *Professional Development Opportunities Program Brochure*, sent to all CTS Council members, provides further information about how to apply for professional development funds, tips for a winning proposal and a funding application form.

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Skills Canada Alberta
(November 1998)

For information on SCA events, contact:
Toni-Lynn Frisch
Edmonton SCA Office
5th Floor, 10035 – 102 Avenue
Edmonton, AB, Canada
T5J 0E5
Telephone: 780–493–2630
Fax: 780–493–2649
Email: <skillsab@planet.eon.net>
OR
Ralf Aggarwal
Calgary SCA Office
2912 Memorial Drive SE
Calgary, AB, Canada
T2A 7R9
Telephone: 403–569–5534
Fax: 403–569–5804
Email: <ralfa@skillscanada.com>

Skills Canada Alberta (SCA) is a nonprofit association with a mission "to stimulate the development of leadership and technological excellence in Alberta youth." The organization was created in 1992 through a joint venture among business, government, labour and education.

Since its inception, SCA has been a vehicle for increasing pathways of communication among education, business, labour and government representatives on the importance of trades and technological education. The goals of SCA are to:

- increase the profile and status of technological education in educational institutions
- stimulate and champion the development of leadership and technological excellence in Alberta's youth
- strengthen technological education through industry–education partnerships
- promote career and technology studies curriculum
- develop leadership skills, and prepare students for future careers
- promote awareness of trades and technology career opportunities.

SCA will host its annual Provincial Skills Competition at the Southern Alberta Institute of Technology (SAIT) on May 6, 1999. This is the first time that the event will be held in Calgary. Twenty-four different trade and technology-based competitions will occur, with approximately 600 senior high school, post-secondary and apprentice-level competitors attending. This event is the qualifier for the 1999 Canadian Skills Competition.

The 1999 Canadian Skills Competition will be held on June 2–6, 1999 in Kitchener, Ontario. More than 800 competitors from across Canada will compete in the technology and trade based areas. The purpose of the competition is to give Canada's top students an opportunity to test their skills and knowledge against industry standards.

Canada will host the 35th World Skills Competition on November 11–14, 1999 in Montreal. The event will welcome participants from 35 countries, participating in over 40 contests. Competitors from the Canadian Skills Competition held in Vancouver on May 14–16, 1998 have been selected to participate in a training program for the World Skills Competition. In June 1999, these individuals will participate in a four-day competition to determine who will represent Canada at this prestigious international event.

Alberta will have an opportunity for strong representation at the World Skills Competition, with more than 20 students vying for a spot on the Canadian team. Good luck to all!

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CAREERS: The Next Generation
(November 1998)

For more information about how you can become involved in this conference, contact:
CAREERS: The Next Generation
Telephone: 780–426–3414 (Edmonton)
Toll Free: 1–888–757–7172 (outside Edmonton)

CAREERS: The Next Generation was founded in 1994, with the specific goal of creating community partnerships between employers and educators that would help bridge the gap between work and school. The objectives of CAREERS: The Next Generation are focused on:

- helping young people find rewarding careers, and preparing them better for the workplace and for adapting to change
- creating community-driven initiatives that are well-focused on skill and educational issues
- helping business and industry find the skilled, motivated work force they need to remain competitive
- beginning work force development at an earlier age, to help young people hone the skills and provide the resources communities need to excel in the future.

CAREERS: The Next Generation will be hosting its second conference on November 25–27, 1999 at the Fantasyland Hotel in Edmonton. This conference will focus on school-to-work transitions, and will be of particular interest to employers, educators and community leaders involved in providing technical and trades training for young Albertans.

Supporting Resources

Opportunities for You *Video*
(October 1996)

Copies of the video may be obtained through ACCESS: The Education Station, by calling 780–440–7777.

Opportunities for You is a 15-minute program designed to encourage students to consider career opportunities offered through the trades and technologies. It explores some of the offerings in CTS, the Registered Apprenticeship Program and related locally-developed programs in various parts of Alberta. The video also shows links between these programs and post-secondary institutions and the workplace. While the program has been produced for Grade 9 students planning their high school programs, it would also be of interest to students in other secondary grades, to teachers and to parents.

The program was produced by ACCESS: The Education Station, under the guidance of CAREERS: The Next Generation, Alberta Education, Alberta Advanced Education and Career Development, Human Resources Development Canada, the Alberta Society of Engineering Technologists (ASET) and other partners.

Opportunities for You is accompanied by two print items. The first is a questionnaire students can complete and submit for more information about the many careers available to them. The second is a brief guide to assist presenters using the program.

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Publications Catalogue for Technology Teachers
(June 1998)

For more information, contact:
International Technology Education Association
Suite 201
1914 Association Drive
Reston, VA, USA
20191–1539
Telephone: 703–860–2100
Fax: 703–860–0353
Email: <itea@iris.org>

The International Technology Education Association (ITEA) produces a publications catalogue of potential interest to CTS teachers. The catalogue is available upon request, at no cost, and provides a listing of:

- information sources on technology careers
- professional journals
- technology education activity packs
- technology education software banks.

Career Development Resources
(June 1998)

To obtain a catalogue, contact:
Alberta Advanced Education and Career Development
Career and Labour Market Information
Telephone: 780–422–1794
Fax: 780–422–5319
Email: <careerinfo@aecd.gov.ab.ca>

Alberta Advanced Education and Career Development has produced the Career Shop, a catalogue of career development resources. The catalogue provides a well-researched listing of current sources of career and labour market information, and includes:

- publications
- posters
- audiovisuals.

An electronic version of the catalogue is available through the Alberta Learning Information Service web site at <http://www.alberta-learning.ab.ca>.

Practical Ideas for Integrating Technology into Your Classroom
(November 1998)

For information on obtaining this resource, contact:
Margaret Stambuski-Dart
Telephone: 403–546–3863
Fax: 403–546–4476
Email: <stambusm@cadvision.com>

Are you looking for practical ideas and tips for integrating technology into your classroom? *Yes! I Can! Technology Tricks for the Classroom* is a how-to manual containing 27 tried and true ideas for the teacher looking for assistance. The resource includes a range of ideas from online demonstrations to clothing labels that were gleaned from the Foods and Fashion Studies labs. Many ideas are transferable to other classrooms and subject areas.

The book was written by Margaret Stambuski-Dart, with the teacher in mind, and includes ideas from her presentations at the annual CTS Summer Leadership Seminar and CTS Conference. The resource includes blackline masters, strategies on disk and numerous pages that list relevant web sites.

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Agriculture

Black Gold Storefront School Offers Summer Program in Equine Studies *(November 1998)*

For more information about this summer equine program, contact:
Shirley Jorgensen
Black Gold Storefront School
Leduc, AB, Canada
Telephone: 780–986–9466
Fax: 780–986–9484
Email: <sjorgens@blackgold.ab.ca>

Ten students in Black Gold Regional Division No. 18 took advantage of an opportunity to enhance their equine expertise, through a summer program offered by Black Gold Storefront School in Leduc. The summer program enabled students to participate in a range of equestrian projects that included tracing championship bloodlines, designing a dream stable, teaching a horse to graduate from the snaffle bit to the curb bit, planning and training for a young horse's first show, and researching hypothyroidism.

The CTS Equine Studies program began in May 1998, when students met with their course coordinator, Shirley Jorgensen, to develop individualized programs, based on courses from the Agriculture strand, that they would complete and be evaluated on over the next three months. Each student program addressed business aspects of horse ownership, such as financial planning, inventory and seasonal costs. Students were also required to perform and document a range of horse management tasks and keep a logbook of the time spent riding in Pony Club, 4-H Club or in personal training.

The highlight of the course was three days spent riding the mountain trails of the Ram River Falls recreation area west of Rocky Mountain House. Through the sun and mist of early July, and under the guidance of a professional outfitter, students learned to apply their riding skills in a unique setting. Shirley considers the independent study approach to have been appropriate for offering this summer school program to a group of students with diverse riding skills, experience and interests—"All students were able to experience the wilderness ride on an equal footing."

Horse lovers rejoice! If you can't take your horse to school, then perhaps your school can come to your horse.

Access to Green Certificate Training Program Expanded *(January 1998)*

For more information about Green Certificate, contact:
Doug Taylor
Supervisor, Green Certificate
Alberta Agriculture, Food and Rural Development
Telephone: 780–427–2171
Fax: 780–422–7755
Email: <douglas.taylor@agric.gov.ab.ca>

The Green Certificate Training Program, operated by Alberta Agriculture, Food and Rural Development in partnership with the farming industry, offers an effective way to develop and assess technical competencies defined within some of the Agriculture courses and, at the same time, enables students to gain skill certification recognized by industry. As a result of testing conducted in June 1997 by Alberta Agriculture, Food and Rural Development, 108 students were certified as Technicians and six students were certified as Production Supervisors within the program.

To address increasing interest in this program, a *Green Certificate Teacher Pak* was mailed to all rural high schools during the summer of 1997. This information package contains brochures, a video and various program documents, and it provides information regarding Green Certificate training opportunities that may be considered for high school credit through various course enrollments.

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To support expanded student access to the Green Certificate Training Program, regional representatives have been appointed across the province. The following individuals can be contacted by teachers, students and parents for information and advice regarding the program.

Peace Country
John Milne
Fairview College
Box 3000
Fairview, AB, Canada, T0H 1L0
Telephone: 780–835–6630
Fax: 780–835–6784

North East
Walter Scott
Alberta Agriculture, Food and Rural Development
Box 24, 4701 – 2 Street
Vermilion, AB, Canada, T9X 1J9
Telephone: 780–853–8223
Fax: 780–853–4776

North West
Garry Clark
Alberta Agriculture, Food and Rural Development
6204 – 49 Street
Barrhead, AB, Canada, T7N 1A4
Telephone: 780–674–8213
Fax: 780–674–8362

South
John Calpas
Lethbridge Community College
3000 College Drive South
Lethbridge, AB, Canada, T1K 1L6
Telephone: 403–320–3311
Fax: 403–380–3537

(November 1998)

The Green Certificate Farm Training Program continues to grow and flourish in many schools and communities in Alberta. As of November 1998, there were over 400 students in 66 schools developing work skills and meeting requirements for high school credits in CTS and Work Experience through the program's "apprenticeship-like" training system. In June 1998, 150 Farm Technician Certificates were awarded to students, many of whom were registered in CTS courses.

Green Certificate was one of the featured programs at a recent conference in Camrose, called Creating Youthful Communities. The conference was sponsored by the East Central Alberta Community Futures Development Corporation with assistance from Human Resources Development Canada. Green Certificate made a big impression, by providing a concrete example of a locally-based career training program in a sector of the local economy with promising job prospects.

Green Certificate also will be showcased in an upcoming career conference sponsored by the Leduc/Nisku Economic Development Authority in partnership with Black Gold Regional Division No. 18 and St. Thomas Aquinas Roman Catholic Separate Division No. 38. Over 3500 students, teachers and parents are expected to be introduced to local career and training initiatives at this conference.

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Green Certificate Handbook for Administrators
(June 1998)

For more information, contact:
Battle River Regional Division No. 31
Telephone: 780–672–6131
Fax: 780–672–6137
Email: <steves@telusplanet.net>

The Battle River Regional Division No. 31 has developed a *Green Certificate Handbook for Administrators*. The handbook outlines strategies used by schools in this division to implement and manage the Green Certificate Training Program.

Other high school administrators, CTS coordinators and teachers planning Green Certificate programs may be interested in obtaining a copy of this handbook, available at a nominal cost to cover printing and postage expenses.

Directory of Agriculture Organizations
(January 1998)

To receive a copy of the *1997–1998 Greenbook*, contact:
Maria Crudo
CTS Unit
Telephone: 780–427–3139
Fax: 780–422–0576
Email: <mcrudo@edc.gov.ab.ca>

Available to Agriculture teachers on a complimentary basis is the *1997–1998 Greenbook: Alberta Farm & Ranch Directory*, a concise directory of agriculture-related organizations within the province of Alberta.

The directory was produced by the Rural Education and Development Association (REDA) and provides information about the services offered by major commodity organizations, cooperatives, marketing boards and commissions, food service and promotional organizations, and special interest organizations. Also included in the directory are educational organizations, crown corporations and government agencies that serve the agriculture industry.

Teachers will find the directory to be a useful source of contacts for accessing up-to-date information relevant to a variety of courses within the Agriculture strand.

Agribusiness Scholarship Links with CTS Agriculture
(November 1998)

For more information, or to obtain posters and application forms, contact:
Monsanto Canada Incorporated
Telephone: 905–814–2499
Fax: 905–826–4278

Monsanto Canada Incorporated is once again offering the Monsanto Agribusiness Scholarship to graduating high school students. This scholarship program is intended to assist graduating students wishing to pursue a college or university education. A total of fifty $1000 scholarships will be made available to graduating students in the provinces of Alberta, Saskatchewan, Manitoba, Ontario and Quebec.

Eligible students must be high school graduates from a farm family who are commencing a degree or diploma program in agriculture, agriscience or management at a Canadian university or college in the fall 1999 session. Selection of applicants will be based on academic standards, demonstrated leadership in the community, and university or college acceptance.

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Career Transitions

Job Safety Skills Credential
(June 1998)

As of June 1998, there were 289 schools delivering, and more than 5600 junior and senior high school students enrolled in, one or more of the three Job Safety Skills courses in the Career Transitions strand. These courses include:

- CTR1210: Personal Safety (Management)
- CTR2210: Workplace Safety (Practices)
- CTR3210: Safety Management Systems.

Students who achieve a mark of 70% or greater in one or more of the three Job Safety Skills courses can obtain a Certificate of Competency from the Job Safety Skills Society. Teachers can facilitate student access to this credential by reporting the names of students who meet the credentialling standard to the Job Safety Skills Society.

For more information about the Job Safety Skills courses and the Job Safety Skills Society, contact:
Michael Alpern
CTS Program Consultant
Telephone: 780–422–3272
Fax: 780–422–0576
Email: <malpern@edc.gov.ab.ca>

The Job Safety Skills Society can be contacted at:
Box 37073
Lynnwood Post Office
Edmonton, AB, Canada
T5R 5Y2
Telephone: 780–413–6876
Fax: 780–413–6877

Teacher Manuals Available for Job Safety Skills
(January 1998)

The Job Safety Skills Society, a nonprofit organization dedicated to the enhancement of safety education, has published manuals to support the delivery of the Job Safety Skills courses in the Career Transitions strand. Teacher manuals are available for each of the three Job Safety Skills courses.

Each of the three teacher manuals provides instructional support materials, including lesson plans, fact sheets and assessment instruments. The manuals have been authorized by Alberta Education for use in Alberta schools.

Schools offering one or more of the three Job Safety Skills courses may obtain one copy of the appropriate manual(s) by contacting the Job Safety Skills Society as indicated in the sidebar above.

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Job Safety Skills Society Teacher Inservice Program
(November 1998)

For more information, contact:
Michael Alpern
CTS Program Consultant
Telephone: 780–422–3272
Fax: 780–422–0576
Email: <malpern@edc.gov.ab.ca>

The Job Safety Skills Society recently developed an inservice program for teachers delivering or planning to deliver the three Job Safety Skills courses in the Career Transitions strand.

The inservice program was very well received, as over 200 senior high school teachers, from school authorities throughout Alberta, attended one-day inservices offered in Lethbridge, Calgary, Red Deer, Edmonton, Grande Prairie and Fort McMurray. Each inservice, provided at no cost to schools and participating teachers, featured presentations by an educator, a safety professional representing the Job Safety Skills Society, and approximately four safety professionals from the local community.

Another series of inservice sessions is scheduled for 1999 for junior and senior high school teachers.

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Communication Technology

Real-life Learning in Communications through Teamwork at St. Mary's
(June 1998)

For more information about this project, contact:
Michael Shain
St. Mary's High School
Telephone: 403–228–5810
Fax: 403–229–9280
Email: <michael.shain@crcssd1.calgary.ab.ca>

Three capable students studying Communication Technology at St. Mary's High School in Calgary collaborated in the design and development of a multimedia product. The product was a short CDROM that introduced basic photography concepts, such as parts of a camera, different camera types, film types, aperture control and shutter speed control.

Each of the three students was registered in an individualized 3-credit CTS cluster, designed together with the teacher. Working from courses in Design Studies, Communication Technology, Information Processing and Career Transitions, the students used a shared network drive and completed selected courses as they contributed to the team effort. Student 1 had responsibility for the animated titles, planning and some multimedia authoring. Student 2 was responsible for the navigation icons, digital photography and overall "look" of the product. Student 3 assumed responsibility for the general planning and authoring of the project.

Teacher Michael Shain says, "The best thing about CTS is the flexibility it provides to create real-life products through teamwork situations." In talking about the CDROM project, he said: "The three students work well together in critiquing, helping each other, planning and implementing the product. If all goes well, we plan to make the final product available to others on our school's intranet."

Communication Technology at McNally Enables Students to Explore Careers in Multimedia
(November 1998)

For more information, contact:
Garry Silverman
McNally Composite High School
Telephone: 780–469–0442
Fax: 780–465–5958
Email: <gsilverm@epsb.edmonton.ab.ca>

The Communication Technology program at McNally Composite High School in Edmonton provides an overview of the skills needed to produce multimedia projects. At the same time, it creates an awareness of growing employment opportunities in the communications field.

Teacher Garry Silverman has designed an introductory, reality-based multimedia program revolving around the following courses from the Communication Technology strand: COM1030: Photography 1, COM1070: Animation 1 and COM1080: Digital Design 1. HyperStudio was chosen as the authoring software, because it incorporates all the multimedia components; can be used for introductory work, as well as sophisticated projects; and is cost-effective to implement in a computer lab setting.

Garry believes that students should be given every opportunity to explore and develop skills that can be directly transferred to the workplace. Students begin by learning basic HyperStudio authoring skills for the production of multimedia presentations, and then study path and frame animation. Photography involves the use of digital cameras and Photoshop for editing. Computers are equipped with cards, for the capture of digital video, and use Premiere for editing. Completed projects integrate text, graphics, sound, digital photographs and video.

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A major focus of the program is to motivate students to pursue further study of multimedia. The communications industry has cited a shortage of personnel trained in the integration of sound, graphics and video, at a time when demand for integrated multimedia products is growing at an exponential rate.

Electronic Newsletter for Communication Technology Teachers (*November 1998*)

For more information, contact:
Michael Peterson
Merlan Scientific
247 Armstrong Avenue
Georgetown, ON, Canada
L7G 4X6
Telephone: 1–800–387–2474
Fax: 1–800–374–6714
Email: <mikep@merlan.ca>
Web Site: <http://www.merlan.ca>

Merlan Scientific offers an electronic newsletter of potential interest to Communication Technology and Design Studies teachers. Designed specifically for users of Autodesk products, the newsletter provides current information regarding:

- courseware availability and costs
- online projects and networking opportunities
- pedagogical problems and solutions
- noteworthy web sites
- teacher training and inservice programs
- competitions, awards and other student activities.

HyperStudio Software for Courses in Communication Technology (*November 1998*)

The DataNet Communications web site can be visited at <http://www.datanetcomm.com/HyperStudio.html>.

For more information, contact:
Dave Walker
DataNet Communications
Telephone: 780–460–7266
Fax: 780–460–5057
Email: <dwalker@datanetcomm.com>

HyperStudio is a student-centred multimedia authoring software package that supports the delivery of a number of courses in the Communication Technology and Information Processing strands. Due to its combination of power and ease of use, HyperStudio can be used from elementary grades through senior high school as a vehicle to study all aspects of multimedia authoring and as a tool to integrate technology across the curriculum.

Alberta Education and DataNet Communications have signed an Umbrella Agreement for HyperStudio software licences. The purpose of the agreement is to provide all school authorities in Alberta with an equitable and uniform pricing structure for HyperStudio, along with technical support. DataNet Communications also offers a variety of professional development opportunities and companion products, including tutorials, books and other resources that support the use of HyperStudio.

Information regarding HyperStudio licences, related technical support, multilevel training and companion products is provided at the DataNet Communications web site.

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Community Health

Students at Jasper Place High School Learn About Themselves and Others
(January 1998)

For more information about this course, contact:
Eileen Hause Spillett
Jasper Place High School
Telephone: 780–408–9000
Fax: 780–486–1984

A CTS course offered at Jasper Place High School in Edmonton promotes personal growth experiences for students as they learn about themselves, children and possible career paths for the future. The course, called Community Health: Child Development, combines 1-credit courses in Community Health to enable students in Grade 11 and Grade 12 to learn about children through practical experiences in child care. Incorporated into the CTS course are credentialling opportunities for students in Day Care Level 1 Orientation, Alberta Family and Social Services; and Child Care First Aid, The Canadian Red Cross Society/St. John Ambulance.

The main purpose of the course is to help students prepare for entry into a variety of child-centred career fields; e.g., health care, education, social services, recreation, arts, parenthood. As students become involved in the course, teacher Eileen Hause Spillett notices that they refine their problem-solving skills, learn to use more positives, become more creative and make efforts to build stronger relationships with each child in their care.

Students have responded to the course with comments like: "I liked the practical experiences." "Learning about first aid was great." "Kids are more complex than we thought." "The children love us." "We are role models." As one particular student stated:

> If you love kids and want to learn more about them and yourself, this course is for you.

The certificates granted to students through their achievements in this CTS course look great on résumés.

Fashion Studies, Foods and Community Health Software
(June 1998)

For more information, contact:
Nancy Parker-Vollrath
Midsun Junior High School
660 Sunmills Drive SE
Calgary, AB, Canada
T5X 2Y9
Telephone: 403–777–6430
Fax: 403–777–6432
Email: <nvollrath@cbe.ab.ca>
OR
Margaret Stambuski-Dart
Dr. Elliott Community School
Linden, AB, Canada
T0M 1J0
Telephone: 403–546–3863
Fax: 403–546–4476
Email: <stambusm@cadvision.com>

For the Fashion Studies, Foods and Community Health strands, there is an increasing number of interesting, comprehensive software applications from which to choose, be they in CDROM, floppy disk or beta program format. To assist teachers with the task of selecting and purchasing valuable classroom applications for these strands, Nancy Parker-Vollrath and Margaret Stambuski-Dart have offered to act as information sources for Alberta teachers. As authors of the *Technology Resource Manual*, 1995, Nancy and Margaret are knowledgeable about system requirements and the software currently being used in Fashion Studies, Foods and Community Health classrooms across the province.

To assist CTS teachers with integrating technology into their programs, Nancy and Margaret offered in-depth workshops on a variety of applications for these strands. In 1998, a network database, including teachers' names, contact information, and hardware/software applications in use, was being developed. If you are using technology in your Fashion Studies, Foods or Community Health programs, contact Nancy or Margaret, so that your name can be added to the network database.

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Construction Technologies

Recipe for a Successful Construction Technologies Program
(January 1998)

For more information about this project, contact:
Darrell Teske
R. F. Staples High School
Telephone: 780–349–4454
Fax: 780–349–5948

If your high school Construction Technologies program needs a main order of genuine experience with a healthy side order of entrepreneurialism, try the following recipe used at R. F. Staples High School in Westlock.

Determined to provide his students with a unique experience, teacher Darrell Teske investigated the possibilities of having his students act as general contractors, business managers and owners of a residential property. Initial plans for his students to become involved in a renovation project were expanded to provide opportunities for students to build, manage and own a new home.

The project was financed through a loan of $75 000 to the newly formed R. F. Staples Construction Group by Tawatinaw Community Futures Development Corporation, a branch of the federal lending agency, Western Diversification. Throughout the project, students were involved in establishing a business plan, securing a loan, seeking subtrades and building their house.

Feedback on the project, from the local community, has been extremely positive.

Video on Careers in the Construction Industry
(November 1998)

For more information, contact:
Frank Duchscherer
Merit Contractors Association
Telephone: 780–455–5999
Fax: 780–455–2109
Email: <meritedm@merit.ca.com>
OR
Graeme Proudfoot
Merit Contractors Association
Telephone: 403–291–9247
Fax: 403–291–4028
Email: <meritcal@merit.ca.com>

The web site for ACCESS: The Education Station is at <http://www.accesslearning.com/accessfront/home.html>.

Building Careers in Construction is a 30-minute video that focuses attention on lifetime career opportunities for young people in the construction industry. Developed by Merit Contractors Association, this video is intended for use with:

- junior high school students as part of a career counselling program
- senior high school students who are exploring opportunities to make training in the construction trades a part of their high school program.

The video features a number of Edmonton and area high school students involved in CTS and the Registered Apprenticeship Program (RAP). By watching and listening to the RAP students, journeymen and CTS teachers interviewed throughout the video, students can become aware of the range of job, career and training opportunities available in the construction trades.

A condensed version of the video was sent to all superintendents and senior high school principals in May/June 1998. The complete video is available from ACCESS: The Education Station.

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Construction Safety Training System Prepares Students for the Workplace
(November 1998)

For more information, contact:
Art Rieudeau
Alberta Construction Safety Association
Telephone: 780–453–3311
Fax: 780–455–1120

Merit Contractors Association and the Alberta Construction Safety Association are promoting safety in the construction workplace through their Construction Safety Training System (CSTS) program. The program provides safety training through an interactive CDROM; an industry-recognized safety certificate is provided to learners who successfully complete the training program.

The CSTS program enables students to develop an understanding of basic construction safety principles and to meet the safety standards set by industry for employment. The program includes 12 modules delivered through a self-paced CDROM learning system that monitors, evaluates and documents the learner's progress. The program requires minimal teacher involvement in its delivery and takes between four and six hours to complete.

The CSTS certificate is a minimum industry requirement for workers at many construction sites throughout Alberta, and will benefit students looking for summer jobs that involve work around buildings and/or machinery. Merit Contractors Association, in providing placements for Work Experience and Registered Apprenticeship Program students in the construction trades, requires that students complete the CSTS program before commencing their workplace assignments.

The Alberta Construction Safety Association has agreed to provide the CSTS program materials to Alberta senior high schools at no cost. A nominal fee of $5 per student is charged for registering students, who successfully complete the program, with the Alberta Construction Safety Association and for the issuing of their certificates.

Merit Contractors Association Award
(November 1998)

If you wish to participate in this award program or require further information, contact:
Frank Duchscherer
Merit Contractors Association
10951 – 120 Street
Edmonton, AB, Canada
T5H 3R2
Telephone: 780–455–5999
Fax: 780–455–2109
Email: <meritedm@merit.ca.com>

Merit Contractors Association, a nonprofit association of about 350 companies, offers an annual award to each high school for CTS students enrolled in construction-related courses. The purpose of the award program is to recognize individual achievement, promote construction as a career, and encourage cooperation between education and industry. The award consists of a certificate of achievement and a cash award of $100. This award applies to CTS students for the past (1997–1998) and current (1998–1999) school years.

To qualify for the award, a student must:

- be in Grade 12 and achieve the top standing in a construction-related CTS course
- demonstrate a high level of interest in the course
- demonstrate leadership qualities in the classroom
- demonstrate a cooperative attitude with fellow students and teachers.

The CTS Coordinator/Department Head, in consultation with other CTS teachers, will review candidates on the basis of the identified criteria and make a selection. Presentation will be made by the CTS Coordinator/Department Head (or delegate) at the school's annual awards ceremony. In order for the award to be available in time for the ceremony, the school must notify Merit Contractors Association, by letter or telephone, not less than 3 weeks before the award ceremony, of the winner's name and the presentation date.

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Cosmetology Studies

Submissions Request

A consent form for sharing CTS implementation initiatives taken in your school and community is provided in Appendix 2.

The CTS Team welcomes submissions regarding promising practices in the Cosmetology Studies strand; e.g., successful courses, effective partnerships, recommended practices, so that these might be shared in future versions of this document.

Forward articles to:

Career and Technology Studies Unit
Curriculum Standards Branch
Alberta Education
Devonian Building, 5th Floor East Tower
11160 Jasper Avenue
Edmonton, AB, Canada
T5K 0L2
Telephone: 780–422–4872
Fax: 780–422–0576

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Design Studies

Bellerose Students Make Innovative Use of Technology in Design Studies
(November 1998)

For more information about this Design Studies program, contact:
Brian Noble
CTS Department Head
Bellerose Composite High School
Telephone: 780–460–8490
Fax: 780–459–0798
Email: <nobleb@pschools.st-albert.ab.ca>

Students at Bellerose Composite High School in St. Albert are developing technical skills they need for the next millennium, through courses in Design Studies that focus on basic design principles and architectural design. Offered to students in grades 10, 11 and 12 in a lab equipped with 28 computers, a laser printer and a colour ink jet plotter, the program requires students to spend approximately 95% of their learning time on the computer. Students learn to use a range of computer-assisted design programs and graphics animation software to complete projects that involve:

- architectural elevations, floor plans and working drawings
- computer colour rendering
- animated architectural walk-throughs
- promotional posters and brochures.

As part of an ongoing focus on career planning, students also use the Internet to research architectural history, styles and designers, as well as entrance requirements for architectural schools, universities and technical institutes.

The scope of the Design and Architectural Design program at Bellerose is well-illustrated by a project recently completed by one of the students for a local client. The project involved producing a complete set of architectural drawings—including floor plans, elevations, streetscapes, and an architectural "flythrough" animation of the interior—for a ten-unit condominium complex. The client anticipates construction of the condominium, as planned by the student, to take place in the near future.

The program has been very well received, with many students having gone on to pursue careers in architectural design. CTS Department Head and teacher Brian Noble recently received the Telus Innovative Use of Technology Award, in recognition of his innovative teaching methods and ability to motivate students in the program. Congratulations, Brian!

Electronic Newsletter for Design Studies Teachers
(November 1998)

For more information, contact:
Michael Peterson
Merlan Scientific
247 Armstrong Avenue
Georgetown, ON, Canada
L7G 4X6
Telephone: 1–800–387–2474
Fax: 1–800–374–6714
Email: <mikep@merlan.ca>
Web Site: <http://www.merlan.ca>

Merlan Scientific offers an electronic newsletter of potential interest to Communication Technology and Design Studies teachers. Designed specifically for users of Autodesk products, the newsletter provides current information regarding:

- courseware availability and costs
- online projects and networking opportunities
- pedagogical problems and solutions
- noteworthy web sites
- teacher training and inservice programs
- competitions, awards and other student activities.

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Electro-Technologies

Electro-Technologies/ Physics Courses at Hunting Hills High School
(February 1997)

For more information, contact:
Carl Dyke
Telephone: 403–342–7799
Fax: 403–341–4335
Email: <carld@supernet.ab.ca>.

If you are interested in teaching Electro-Technologies but are a little intimidated by the science background you think you need to get started, you have some options:

- *get together with your mathematics and science teachers and start to learn electronics together*
- *take a night course at SAIT or NAIT*
- *take a distance education electronics course from Selkirk College in Castlegar, British Columbia*
- *purchase electronics magazines off the newsstand*
- *experiment on your own*
- *purchase kits to help with the fabrication component of electronics.*

In keeping with its goals to integrate programs and make them as rigorous and as applied as possible, Hunting Hills High School of the Red Deer School District No. 104 made a direct link between physics and CTS, specifically the Electro-Technologies strand.

In its course offerings for the 1997–1998 school year, Hunting Hills offered a course by the title Physics 30/Electro-Technologies 20 – Applied (10 credits). In this course, students took a class of physics back to back with a class of Electro-Technologies. The purpose in doing so was to help physics students apply theory.

The teachers involved, Sandra Bateman and Carl Dyke, collaborated on content delivery and made a conscious and deliberate effort to relate their activities to each other's classes. While both classes delivered both theory and lab activities, the Electro-Technologies class had more freedom to explore related topics and gave students hands-on practice working with electronic circuits and designing solutions to problems.

The teachers identified the following five 1-credit courses from the Electro-Technologies strand that they felt would enhance the students' experience in Physics 30, as well as apply some of the theory studied previously in Physics 20.

- ELT2090: Analog Communication 2
- ELT2100: Radio Communication
- ELT2120: Electro-optics
- ELT2140: Robotics 2
- ELT3140: Motors

Electro-Technologies School-to-Work Transitions Project
(June 1997)

For more information, contact:
Debbie Vance
Specialist
School-to-Work Transitions Project
Telephone: 403–294–6307
Fax: 403–777–8862

Students at James Fowler High School and Henry Wise Wood High School in Calgary have participated in a school-to-work transitions project in Electro-Technologies. This pilot project was sponsored by Human Resources Development Canada, and involved business, industry, SAIT, the Calgary Board of Education and Alberta Education. Calgary was one of 22 sites involved in the project across Canada, and was the only pilot site in Alberta.

The project was designed to strengthen the employability skills of youth who have a career interest in the electro-technologies field, and to help them make a smooth transition as they move from secondary to post-secondary education and the world of work. CTS Electro-Technologies students had their studies complemented with 250 hours of work experience provided by 16 electro-technologies industries participating in the project.

The Calgary Board of Education held a Regional Institute on May 8 and 9, 1997 to celebrate the project's culmination. Attended by stakeholder representatives, the purpose of this Institute was to:

- acknowledge the work of the students involved
- recognize the business and industry partners involved
- acknowledge the contribution of the partnership
- share insights with Electro-Technologies teachers from across Alberta.

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Energy and Mines

Energy and Mines at Lindsay Thurber
(June 1998)

For more information about the PET program, contact:
Richard Siler
Lindsay Thurber Comprehensive High School
Telephone: 403–347–1171
Fax: 403–346–6411
Email: <rsiler@rdpsd.ab.ca>

The Energy and Mines strand provides a clustered structure through which students at Lindsay Thurber Comprehensive High School in Red Deer are able to take courses in Petroleum and Energy Technology (PET). PET courses offered in Grade 10, Grade 11 and Grade 12 consist of some 17 courses from the Energy and Mines strand, as well as courses from Career Transitions that are specific to activities in the oilfield service industry.

CTS coordinator and teacher Richard Siler advises that students completing PET courses can receive, at the same time, certification in the Workplace Hazardous Materials Information System (WHMIS), Transportation of Dangerous Goods (TDG), Hydrogen Sulphide Alive (H_2S Alive) and Confined Space Entry. This enables students at Lindsay Thurber to move directly into the "oil patch," as well as continue their studies at NAIT or SAIT in the Power Engineering, Chemical Technology or Environmental Technology programs.

Transitions to post-secondary study also have been enhanced by incorporating modules from the SAIT Open Learning Instructional System (SOLIS) into the PET program. Upon writing examinations created and scored by SAIT, PET students are granted advanced credit with the Energy and Natural Resources Department at SAIT.

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Enterprise and Innovation

The Yes! (Youth Entrepreneurs Succeeding) Program
(October 1996)

For more information, contact:
Peace Country Development Corporation
Telephone: 780-338-2125
Fax: 780-338-2160
Email: <pcdcexec@telusplanet.net>

The Peace Country Development Corporation offers the Yes! (Youth Entrepreneurs Succeeding) Program to promote entrepreneurship and job skill development among youth between the ages of 13 and 18 years.

The Yes! Program addresses the needs of the communities, youth out-migration, youth unemployment, youth entrepreneurship and a lack of youth job development skills. It redefines entrepreneurship from the traditional sense, to include skills that are transferable to small businesses as well as other employment.

The Yes! Program focuses on training, counselling, mentorship and financing for youth under the age of 18 years. It is designed to help youth establish businesses, discover the opportunities in small business and develop skills that can be transferred to employment.

The Yes! Program is based on the commitment of its partners:

- local junior and senior high schools are encouraged to provide the CTS Enterprise and Innovation strand. The curriculum will be taught outside of the school by business volunteer teachers and expanded to include such things as investment, customer service, speaking and presentation skills
- the business community is encouraged to provide mentors to be "buddies" to youth entrepreneurs, providing them with assistance in the operation of their business, including marketing, inventory control, purchasing and day-to-day problems
- the community is encouraged to provide dollars that will implement a venture capital pool for the youth in the region. This pool of dollars will guarantee loans provided by Peace Country Development Corporation, where a cosignature by the parent is not available. How the pool will be continued or dismantled, and how interest will be paid to contributors, is decided by the region
- Peace Country Development Corporation is encouraged to provide training to youth participants in areas not covered by the CTS program, including security, equity and credit rating. It will also provide assistance to the partners with implementation, coordination and review of the program.

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Future Entrepreneurs of Canada
(June 1997)

For more information, contact
Susan de Wijk
Lester B. Pearson High School
3020 – 42 Street NE
Calgary, AB, Canada
T1Y 5P4
Telephone: 403–280–6565
Fax: 403–777–7158
Email: <sldewijk@cbe.ab.ca>

Future Entrepreneurs of Canada (FEC) is a registered nonprofit organization that presents marketing, management and entrepreneurial skills to senior high school students interested in business as a career. This includes students who plan to enter the work force, attend post-secondary institutions or become entrepreneurs following senior high school.

FEC's goal is to promote better understanding and communication among students, teachers, parents and the business community. The major focus is to make the classroom learning environment as realistic to the business world as possible. This is achieved through the development of meaningful activities and projects, as well as standard evaluations to assess student achievement.

Any senior high school with a CTS program can join FEC, although the major focus of the projects/competitions is within the Management and Marketing and Enterprise and Innovation strands. A teacher/advisor from each FEC member school sits on the Advisory Committee, which serves as part of the provincial decision-making process. Some schools also have active student chapters that are involved in school-level projects.

The major yearly event of this association is the spring competition held each May.

Edmonton and Area Credit Unions Leadership Award
(November 1998)

For more information, contact:
Deb Walsh
Promotions Coordinator
The Edmonton Journal Marketing Department
Telephone: 780–429–5175
Fax: 780–429–5318
Email: <educate@thejournal.southam.ca>

Members of Chapter III of the Edmonton and Area Credit Unions provide an annual award for two graduating senior high school students in the local community who satisfy entrance requirements to attend a post-secondary institution of their choice. Eligibility criteria for the award includes the attainment of a mark of 85% or higher in Enterprise and Innovation or Financial Management courses at the advanced level.

The award consists of:

- $500 cash for each of the two students
- a certificate for each student
- a trophy to be retained for one year in each recipient's school.

Completed applications must be delivered no later than April 30, 1999 to:

Awards Chairman
Edmonton and Area Credit Unions Leadership Award
c/o Capital City Savings and Credit Union Limited
Suite 300, 8723 – 82 Avenue
Edmonton, AB, Canada
T6C 0Y9

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Canadian Council for Small Business and Entrepreneurship National Conference
(November 1998)

For more information about this conference, contact:
Loraine Bon
CCSBE '99 Conference Coordinator
Telephone: 403-220-8504
Fax: 403-220-8674
Email: <lbon@mgmt.ucalgary.ca>

The Venture Development Program at the University of Calgary, along with the Mount Royal College School for Business and Entrepreneurial Studies, will host the Canadian Council for Small Business and Entrepreneurship (CCSBE) National Conference in Banff on November 11–13, 1999. The theme for the conference will be Entrepreneurship: Peaks and Valleys, thus bringing to mind both the venue of Banff and the cyclical nature of entrepreneurship.

The conference will provide a forum for the sharing of research, as well as for discussion on entrepreneurship education, support for small business and the diversity of small business. The focus will be on increasing the quality and effectiveness of training and support in these areas.

Four basic tracks dealing with Research, Education, Support and Diversity have been identified for the conference. The Education track will target entrepreneurship teachers from Kindergarten to Grade 12 and post-secondary institutions, and will feature an exciting new competition. This Innovative Program Competition invites entries from elementary, secondary and post-secondary institutions. Another feature of the conference is the Business Plan Competition for post-secondary institutions.

For registration information, or for guidelines for either competition, contact Loraine Bon.

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Fabrication Studies

Submissions Request

A consent form for sharing CTS implementation initiatives taken in your school and community is provided in Appendix 2.

The CTS Team would welcome submissions regarding promising practices in the Fabrication Studies strand; e.g., successful courses, effective partnerships, recommended practices, so that these might be shared in future versions of this document.

Forward articles to:

Career and Technology Studies Unit
Curriculum Standards Branch
Alberta Education
Devonian Building, 5th Floor East Tower
11160 Jasper Avenue
Edmonton, AB, Canada
T5K 0L2
Telephone: 780–422–4872
Fax: 780–422–0576

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Fashion Studies

Fashion Design Summer Camp
(October 1996)

For more information, contact:
Cheryl Harrison
Telephone: 780–429–4407
Fax: 780–424–9588

In July 1996, the Fashion Department at Marvel College piloted a Fashion Design Summer Camp, which was developed to introduce junior and senior high school students to the day-to-day work of a fashion designer.

Developed from an industry point of view, the course followed the activities undertaken by a designer, from inspiration, market research and product development through to production and marketing. Students were introduced to theoretical knowledge in the area of new product development; e.g., the role of target markets, trends, textiles and the history of costume. In addition, hands-on activities were undertaken, with an emphasis on skill development in the areas of figure drawing, fashion sketching and rendering of garments and textiles. A number of field trips were taken, including a tour of a local designer's production centre, trips to observe the day-to-day activities of two local designers, and a visit to a fashion shoot for the Edmonton Journal's Flair section.

The week-long camp in July was sold out, with students from junior high school, senior high school and post-secondary institutions attending. As well, one teacher, who was just beginning to teach fashion studies at the junior high level, took the program to gain a better background knowledge of the industry and an understanding of the daily workings of design and manufacturing. Course evaluations ranged from good to excellent for all aspects of the program, with the main criticism being that the students wished to have more time and experience with the course content. Clearly, as an introduction to the work of a designer, the course met student expectations.

Fashion Studies, Foods and Community Health Software
(June 1998)

For more information, contact:
Nancy Parker-Vollrath
Midsun Junior High School
660 Sunmills Drive SE
Calgary, AB, Canada
T5X 2Y9
Telephone: 403–777–6430
Fax: 403–777–6432
Email: <nvollrath@cbe.ab.ca>
OR
Margaret Stambuski-Dart
Dr. Elliott Community School
Linden, AB, Canada
T0M 1J0
Telephone: 403–546–3863
Fax: 403–546–4476
Email: <stambusm@cadvision.com>

For the Fashion Studies, Foods and Community Health strands, there is an increasing number of interesting, comprehensive software applications from which to choose, be they in CDROM, floppy disk or beta program format. To assist teachers with the task of selecting and purchasing valuable classroom applications for these strands, Nancy Parker-Vollrath and Margaret Stambuski-Dart have offered to act as information sources for Alberta teachers. As authors of the *Technology Resource Manual*, 1995, Nancy and Margaret are knowledgeable about system requirements and the software currently being used in Fashion Studies, Foods and Community Health classrooms across the province.

To assist CTS teachers with integrating technology into their programs, Nancy and Margaret offered in-depth workshops on a variety of applications for these strands. In 1998, a network database, including teachers' names, contact information, and hardware/software applications in use, was being developed. If you are using technology in your Fashion Studies, Foods or Community Health programs, contact Nancy or Margaret, so that your name can be added to the network database.

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CADTERNS for Fashion Studies
(June 1998)

For more information, contact:
Marilyn Legard
CADTERNS Representative
CADTERNS Custom Clothing Inc.
Vancouver, BC, Canada
Telephone: 604-980-6249
Fax: 604-980-2044
Email: <cadterns@compuserve.com>
Web Site: <http://www.cadterns.com>

CADTERNS is a custom pattern-making program that generates and drafts women's slopers—skirt, pant, bodice, blouse and sheath—and men's slopers—jacket, classic shirt, trouser, vest and casual shirt—on PCs operating in a Windows environment.

Sewing patterns for any female or male figure, ranging from 4'1" (122 cm) to 6'8" (203 cm) in height and from 29" (74 cm) to 60" (152 cm) in circumference, can be generated using only four measurements. Although other measurements and ease allotments are calculated automatically, personal measurements and preferences can be entered manually. Each sloper is individually calculated in seconds.

Printed or plotted slopers can be used as sewing patterns for wardrobe basics, or to alter other patterns for personal fit. Alternatively, CADTERNS can be interfaced with such CAD programs as Autosketch or AutoCAD to style fashionable new patterns.

(November 1998)

The new CADTERNS Version 4 for Windows will help to broaden your horizons. Version 4 provides the option of personal pattern-making, with the quick and easy Womenswear Starter Set, the sophisticated Menswear City Set or the combination set of both Starter and City Sets.

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Financial Management

Online Consumer Information
(November 1998)

The Industry Canada web site is at <http://www.strategis.ic.gc.ca>.

For additional referrals on consumer topics and questions, contact:
Reference Canada
Telephone: 1–800–667–3355

The Industry Canada web site provides current information on a range of consumer topics of potential interest to both teachers and students. Sections of the web site that have particular relevance to the Financial Management and Legal Studies strands include:

- Licences, Legislation and Regulations
- Consumer Information.

The site also provides access to calculators and other online tools that are useful in a range of daily living scenarios. For example, the Credit Card Costs Calculator will enable students to determine which credit card will charge the least interest and fees, based on their use of credit. The Financial Service Charges Calculator will help students to compare service charges at major banks in Canada.

Edmonton and Area Credit Unions Leadership Award
(November 1998)

For more information, contact:
Deb Walsh
Promotions Coordinator
The Edmonton Journal Marketing Department
Telephone: 780–429–5175
Fax: 780–429–5318
Email: <educate@thejournal.southam.ca>

Members of Chapter III of the Edmonton and Area Credit Unions provide an annual award for two graduating senior high school students in the local community who satisfy entrance requirements to attend a post-secondary institution of their choice. Eligibility criteria for the award includes the attainment of a mark of 85% or higher in Enterprise and Innovation or Financial Management courses at the advanced level.

The award consists of:

- $500 cash for each of the two students
- a certificate for each student
- a trophy to be retained for one year in each recipient's school.

Completed applications must be delivered no later than April 30, 1999 to:

Awards Chairman
Edmonton and Area Credit Unions Leadership Award
c/o Capital City Savings and Credit Union Limited
Suite 300, 8723 – 82 Avenue
Edmonton, AB, Canada
T6C 0Y9

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Foods

St. Francis Students Showcase their Learning by Developing Portfolios
(November 1998)

For more information about this portfolio project, contact:
Pamela Borowski
Food Studies Teacher
St. Francis High School
Telephone: 403–289–8471
Fax: 403–284–3084

Students at St. Francis High School in Calgary are developing portfolios to showcase the skills and competencies they possess as a result of their work in FOD3060: Food Presentation, a 1-credit course in the Foods strand.

Food Presentation requires students to demonstrate their knowledge of the principles and elements of design, by preparing food products that meet certain criteria; e.g., students prepare canapés, garnishes, cold platters, balanced menus and buffets. Photographs are then taken of the food products created by students. Each photograph is mounted on a page, with an explanation of how the food product meets the criteria for each of the concepts studied. The end result is a portfolio, developed by each student, that showcases their knowledge, techniques, food products and creative expression.

Food Studies teacher Pamela Borowski suggests that the portfolio project challenges each student's creative flair and is effective in helping students refine basic techniques for creating and presenting artistic food. "The project enables students to understand the relationship between theory and practical lab requirements—students take a great deal of care in the analysis of each food product and in designing corresponding pages for their portfolios."

Portfolio development has also given students in the class an opportunity to assess creative food presentation as a significant career choice. Many of the students plan to use their portfolios in interviews with prospective employers.

FoodFocus
(October 1996)

For information on obtaining the new food data, contact:
FoodFocus Nutrition Analysis Software for Education
721 South Drive
Winnipeg, MB, Canada
R3T 0C2
Telephone: 204–453–6060
Fax: 204–477–9906
Email: <vprowse@foodfocus.com>
Web Site: <http://www.foodfocus.com/foodfocus>

FoodFocus announces that version 3.0 of its nutrition analysis software has been selected as a basic learning resource by Alberta Education. The Alberta Learning Resources Distributing Centre joins the Manitoba Text Book Bureau and the New Brunswick School Book Branch in distributing FoodFocus software.

FoodFocus is unique in being Canadian. It includes easy-to-use software that uses pictographs to graphically illustrate the nutrient content of selected foods. Although targeted at junior and senior high schools, FoodFocus has been used from elementary school to university and in public health across Canada.

FoodFocus announces the release of version 3.1, which adds a baby carriage pictograph—when a pregnant user is defined— to indicate the degree of success in meeting energy, calcium, iron and folate RNI's and a rainbow pictograph—based on the Health Canada Food Guide rainbow—to indicate the degree of success in meeting Health Canada's recommendations for the number of servings in the four basic food groups.

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FoodFocus Update
(June 1998)

Teachers have been asking for more and better Canadian food nutrient data. Since Health Canada released the 1997 Canadian Nutrient File, this information can be made available to students by adding the 1997 food data to the existing FoodFocus computer program.

This food data reflects Canadian foods, as well as Canadian levels of fortification and regulatory standards. Users will find more fibre data for peas, beans, breads, cereals and related products; more brand names for breakfast cereals and margarine; and more contemporary foods, such as salsa, rice cakes and fruit leather.

As of December 1998, Version 3.2 of FoodFocus includes the cost of foods, so economics can be included in nutrition projects. Having the choice of more measures, and the ability to specify sizes and shapes, makes selecting food quantities easier and more accurate. Multiple nutrient analysis windows make comparing nutrients in foods more convenient. Exploring dietary alternatives when changing a food quantity is a breeze, and seeing the nutrient analysis summary update is as fast and easy as a single keystroke. A body mass index calculator is included.

Dairy Nutrition Council of Alberta
(June 1998)

Contact:
The Dairy Nutrition Council of Alberta
Telephone: 780–453–5942 (Edmonton)
Toll Free: 1–800–252–7530
Fax: 780–455–2196

Nutrition File is a research newsletter written by registered dieticians for individuals involved in nutrition education. It is published four times a year. You can request a complimentary copy, or have your name added to the mailing list, by contacting the Dairy Nutrition Council of Alberta.

The spring 1998 edition of *Nutrition File* focuses attention on Dietary Reference Intakes (DRIs)—expanded nutrient recommendations that can be used to plan and assess diets. The newsletter provides clear definitions and describes the uses for new DRIs that have been established—calcium, phosphorous, magnesium, vitamin D and fluoride—with a special focus on calcium. A practical action segment and consumer handout page also are provided.

Past topics of the *Nutrition File* include:

- calcium and dietary reference intakes
- vitamin D
- nutrition for children aged 6–12 years old
- nutrition of the older Canadian.

(November 1998)

For more information, or to arrange a workshop in your school or community:
Telephone: 780–453–5942 (Edmonton)
Toll Free: 1–800–252–7530
Fax: 780–455–2196

Registered Dieticians from the Dairy Nutrition Council of Alberta will deliver workshops to bring nutrition education to your classroom. The Eating Edge program, suitable for grades 7 through 12, is available to teachers who attend a 1.5-hour, action-packed workshop. Participants receive a 30-page teacher's guide complete with lesson plans and colourful overhead transparencies. Free student worksheets are also available.

Through the Eating Edge program, students learn to develop skills to make healthy food choices in today's ever-changing world. The cost of the workshop and materials is $10 per teacher. This fee is waived for individuals who assist in organizing a workshop.

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Public Health Act *Food Regulation*
(November 1998)

To obtain print copy, contact:
Queen's Printer Bookstore
11510 Kingsway Avenue
Edmonton, AB, Canada
T5G 2Y5
Telephone: 780–427–4952
Fax 780–452–0668

FOD2150: Food Safety & Sanitation requires students to "demonstrate the safe handling of food in a manner consistent with section 43 of the *Public Health Act* Food Regulation." To facilitate public access to this and other legislation, Alberta regulations are available for viewing and downloading through the Internet at <http://www.gov.ab.ca/qp/regs.html>.

Foods teachers can obtain print copies of specific acts and regulations relevant to the food industry from the Queen's Printer Bookstore. This information is also available at most public libraries in the province.

Fashion Studies, Foods and Community Health Software
(June 1998)

For more information, contact:
Nancy Parker-Vollrath
Midsun Junior High School
660 Sunmills Drive SE
Calgary, AB, Canada
T5X 2Y9
Telephone: 403–777–6430
Fax 403–777–6432
Email: <nvollrath@cbe.ab.ca>
OR
Margaret Stambuski-Dart
Dr. Elliott Community School
Linden, AB, Canada
T0M 1J0
Telephone: 403–546–3863
Fax 403–546–4476
Email: <stambusm@cadvision.com>

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Forestry

Taste of Sweet Success for Peace River Forestry Students
(June 1998)

For more information about the birch syrup project, contact:
Mark Ladd
Peace River High School
Telephone: 780–624–4221
Fax: 780–624–4048
Email: <laddm@prsd.ab.ca>

Last school year, a group of Grade 11 students in Forestry at Peace River High School worked on a birch syrup-making project. Students gained hands-on experience in the process of tapping, collecting and boiling sap into syrup.

After the planning period, which began in October 1997, students embarked on the practical aspects of the project on April 2, 1998—tree tapping takes place after six consecutive days of temperatures well above freezing. Students learned that tapping the tree involves a trek into the bush with a manual drill, buckets, spigots and some "elbow grease." After the sap was collected, students learned to monitor the progress of the sap as it boiled down to syrup, a delicate process that took about six hours. Total class production was 10 litres of birch syrup that tasted great.

Technical advice for the project was provided by The Original Alaska Birch Syrup Company, a company in Alaska that specializes in birch sap and its by-products. Funding for the project came from the Manning Diversified Forest Product Research Trust Fund as a Boreal Forest Education Award. The award of $2200 went toward the cost of an evaporator, transportation, food for the students and tapping paraphernalia.

Besides having important educational value as an intensive use of the forest, teacher Mark Ladd said the birch syrup project was a potential source of revenue for the Peace River Forestry class—one gallon of the syrup sells for between $100 and $120. Having been a most successful endeavour, Mark plans to make the project an ongoing part of his Forestry program.

Forestry through Partnerships at Fort Assiniboine
(November 1998)

For more information, or to offer suggestions as to how the Fort Assiniboine Forestry Centre can help you, contact:
Murray Hardcastle
Project Manager/Principal
Fort Assiniboine School
Telephone: 780–584–3751
Fax: 780–584–3876
Email: <mhardcastle@phrd.ab.ca>

Fort Assiniboine School, located in an area of the province that is home to a number of lumber mills, logging operations and reforestation projects, has embarked on a five-year forestry education project, with the goal of becoming a "Forestry Centre." Having received funding support from Timeu Forest Products Ltd., the project is poised to build interest, awareness and competencies relevant to the forest industry. The project is designed around three phases of implementation.

Phase one focused attention on integrating forestry education into the school community. During a school planning day in August 1998, the staff at Fort Assiniboine School connected with the local forest industry, by participating in a tour of Timeu Mill, Millar Western Forests and the Fort Assiniboine Sandhills. Subsequent to the tour, school staff established plans to integrate forestry education into existing elementary and junior high school curricula. At the junior high school level, courses in Forestry and Wildlife are using expertise and resources available through the Junior Forest Wardens Program. These Forestry and Wildlife courses are also being linked to the junior high science program.

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Phases two and three, scheduled to begin in the spring and fall of 1999 respectively, will see the forestry education program at Fort Assiniboine School branch out at first to other schools within Pembina Hills Regional Division No. 7, and then to schools outside their district. The Forestry Centre plans to offer student-guided forestry field trips, weekend courses comprised of practical field components from the CTS curriculum, and a travelling drama show depicting an unbiased view of issues surrounding the forest industry. During phase three, the Fort Assiniboine School staff will be available to discuss forestry integration and offer assistance to others in the province who are involved in delivering forestry education.

Murray Hardcastle, Project Manager and Principal of Fort Assiniboine School, says sponsorship of this initiative by Timeu Forest Products Ltd. demonstrates their commitment to education—"As their representative, the Fort Assiniboine School will strive to offer a balanced perspective of the forest industry."

Alberta Conservation Education Programs Are Privatized
(October 1996)

For more information, contact:
Dave Paplawski
Program Coordinator
Alberta Conservation Education
Telephone: 780–466–6682
Fax: 780–431–2871

A number of Alberta Conservation Education Programs, including the Alberta Conservation and Hunter Education Program, the Alberta Fishing Education Program, Project WILD and the Outdoor Camp Program, support the delivery of courses in the Forestry and Wildlife strands. These programs, formerly sponsored by Fish and Wildlife Services, have become privatized. Now, each of these programs and their related materials are made available at a small cost through the W.I.S.E. Foundation, a nonprofit organization committed to conservation education.

FEESA Offers Inservice Opportunities for Teachers
(February 1997)

To obtain a copy of FEESA's *1996–97 Professional Development Guide* or *Resource Guide*, contact:
FEESA, An Environmental Education Society
Telephone: 780–421–1497
Fax: 780–425–4506
Email: <feesa@telusplanet.net>

FEESA, An Environmental Education Society offers a number of professional development opportunities for teachers that focus attention on Alberta's environment and natural resources. These programs will be of particular interest to teachers implementing courses in Agriculture, Energy and Mines, Forestry and Wildlife.

Each FEESA program emphasizes a bias-balanced approach and strives to reflect the diversity of views and values held by Albertans with regard to environmental issues. The programs are offered through the joint efforts of FEESA and various government, industry and environmental organizations, and include EcoLabs, EcoTours and summer institutes.

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Linking CTS Forestry with the Junior Forest Wardens Program
(January 1998)

For more information about Junior Forest Wardens programs in Alberta, contact:
Bob Young
Provincial Coordinator
Forestry Youth Programs
Telephone: 780–422–5172
Fax: 780–415–1831
Email: <byoung@env.gov.ab.ca>

Junior Forest Wardens (JFW) is a national outdoor environmental and forestry education program sponsored in Alberta by the Forest Protection Division of Alberta Environmental Protection. JFW provides hands-on experience for youth that fosters awareness, appreciation and respect for our natural environment. Through a focus on the principles of sustainability and responsible use, members develop knowledge and skills that link with competencies defined in a number of the CTS Forestry courses.

Program objectives for JFW are defined through their *Educational Framework* and numerous activity manuals that develop competencies in four basic areas—forestry, ecology, woodstravel and leadership. Contact with professional foresters and industry partners provides JFW members with exposure to responsible forest management techniques and viable career options.

To explore opportunities for linking courses in Forestry with programs and services offered by JFW in your community, contact one of the Regional Coordinators listed below.

<u>North West</u>
Rick Moyse
Bag 900–39
Peace River, AB, Canada
T8S 1T4
Telephone: 780–624–6221
Fax: 780–624–5511

<u>North East</u>
Garry Nelson
Room 21, Provincial Building
4901 – 50 Street
Athabasca, AB, Canada
T9S 1E2
Telephone: 780–675–8168
Fax: 780–675–8165

<u>Central</u>
Rena Lee/Terri Potter
7th Floor, 9920 – 108 Street
Edmonton, AB, Canada
T5K 2M4
Telephone: 780–427–6233
Fax: 780–415–1831

<u>South</u>
Rick Wolcott
Box 70028, Bowness Postal Station
Calgary, AB, Canada
T3B 5K3
Telephone: 403–297–8851
Fax: 403–297–8865

AFPA Resources for Forestry
(June 1998)

To obtain a list of web sites or copies of the print materials, contact:
Alberta Forest Products Association
200, 11738 Kingsway Avenue
Edmonton, AB, Canada
T5G 0X5
Telephone: 780–452–2841
Fax: 780–455–0505
Web Site: <http://www.abforestprod.org>

Thanks to the efforts of the Alberta Forest Products Association (AFPA), a newly compiled list of web sites providing forestry information is now available. Forestry print materials available from the AFPA, at no cost, include:

- *Educational Resources*—a series of six brochures
  1. Products from Canada's trees
  2. Alberta's trees "A Renewable Resource"
  3. Planting a conifer tree seedling
  4. Provincial tree of Alberta
  5. Are we running out of trees?
  6. Biodiversity: An Environmental Imperative
- *Our Growing Resource*—a book on the Alberta forest products industry
- *FORESTCARE Codes of Practice*—a booklet on the FOREST*CARE* Program.

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Amoco Canada Produces Resource Package
(February 1997)

For more information regarding this resource package, contact:
Amoco Canada Petroleum Company Ltd.
Telephone: 403–233–1425
Fax: 403–233–1476

Amoco Canada Petroleum Company Ltd., in partnership with the CTS Wildlife Assessment Panel and other educators, has developed a four-part video series, called *Nature's Legacy*, for use in CTS courses in Wildlife and Forestry. Videos in the series include:

- *A Southwestern Safari*
- *Alberta's Grasslands and Parklands*
- *Wildlife at Risk*
- *Prairie Wildlife: A Complex Web.*

Each 35-minute video is accompanied by a Teacher's Resource Guide that provides suggestions and activities for using the video in specific CTS courses.

Developed by Amoco Canada as part of its ongoing Partnership in Education program, the videos use Alberta-based photography and interviews to affirm the need for management of the environment. The videos and guides were distributed on a complimentary basis to each school in the province in May 1995 and October 1996.

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Information Processing

CTS Offerings at Archbishop MacDonald Embrace Technological Literacy
(November 1998)

For more information about the courses offered in CTS, contact:
Rosemary Ollis
CTS Coordinator
Archbishop MacDonald High School
Telephone: 780-451-1470
Fax: 780-455-5571
Email: <ollisr@armac.ecs.edmonton.ab.ca>

Archbishop MacDonald High School continues to maintain its tradition as a leader in technological innovation through course offerings in CTS.

Prior to the provincial implementation of CTS, administrators and parents in this school community recognized the essential role of technological literacy in the lives of future graduates. In response, the school has been providing information and data processing courses—instruction in computer operations, keyboarding, word processing and other essential data processing applications—as a required instructional component for a number of years.

Today, Archbishop MacDonald High School views CTS as integral to the success of students and continues to emphasize the role of technological literacy. In addition to having over 200 Grade 10 students enrolled in introductory Information Processing courses, Archbishop MacDonald High School boasts a high rate of enrollment in intermediate level and advanced level Information Processing courses. This dedication to technology has helped many of Archbishop MacDonald's students get jobs in the technology sector and helped them to enjoy entrepreneurial success in areas ranging from web site authoring to software design.

Archbishop MacDonald High School also prides itself on the abundance of CTS offerings in other areas. Although the purchase of software for Design Studies may have cost the school many thousands of dollars, students have taken to CAD with an enthusiasm that was noticeably absent in previous non-computer based drafting courses. Courses in Financial Management, offered on an independent study basis at the intermediate and advanced levels, consistently draw in excess of 50 eager future entrepreneurs. In addition, the school has been able to combine, with core curriculum, CTS courses on Biotechnology, Nutrition and Digestion, Outdoor Experience, and Petrochemicals.

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HyperStudio Software for Courses in Information Processing
(November 1998)

The DataNet Communications web site can be visited at <http://www.datanetcomm.com/HyperStudio.html>.

For more information, contact:
Dave Walker
DataNet Communications
Telephone: 780–460–7266
Fax: 780–460–5057
Email: <dwalker@datanetcomm.com>

HyperStudio is a student-centred multimedia authoring software package that supports the delivery of a number of courses in the Communication Technology and Information Processing strands. Due to its combination of power and ease of use, HyperStudio can be used from elementary grades through senior high school as a vehicle to study all aspects of multimedia authoring and as a tool to integrate technology across the curriculum.

Alberta Education and DataNet Communications have signed an Umbrella Agreement for HyperStudio software licences. The purpose of the agreement is to provide all school authorities in Alberta with an equitable and uniform pricing structure for HyperStudio, along with technical support. DataNet Communications also offers a variety of professional development opportunities and companion products, including tutorials, books and other resources that support the use of HyperStudio.

Information regarding HyperStudio licences, related technical support, multilevel training and companion products is provided at the DataNet Communications web site.

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Legal Studies

Legal Resource Centre
(October 1996)

The Legal Resource Centre, which is now part of the Legal Studies Program at the Faculty of Extension of the University of Alberta, has print and teacher materials available. The Legal Resource Centre Library can be contacted at 780–492–5732. Audiovisual material is available from the Film and Video Booking Department of the Educational Media Centre at 780–492–5039. There is a cost involved.

LawPac Series Tip Sheets Useful in Legal Studies
(January 1998)

The use of the *LawPac Series* Tip Sheets is suggested in the Student Learning Guides for some courses in the Legal Studies strand. However, a source for obtaining this resource is not provided. The Tip Sheets are available upon request, at no cost, from the Legal Resource Centre Library, Faculty of Extension, University of Alberta.

To obtain the *LawPac Series* Tip Sheets, contact the Legal Resource Centre Library:
Telephone: 780–492–6180
Fax: 780–492–5732.

Online Consumer Information
(November 1998)

The Industry Canada web site provides current information on a range of consumer topics of potential interest to both teachers and students. Sections of the web site that have particular relevance to the Financial Management and Legal Studies strands include:

- Licences, Legislation and Regulations
- Consumer Information.

The site also provides access to calculators and other online tools that are useful in a range of daily living scenarios. For example, the Credit Card Costs Calculator will enable students to determine which credit card will charge the least interest and fees, based on their use of credit. The Financial Service Charges Calculator will help students to compare service charges at major banks in Canada.

The Industry Canada web site is at <http://www.strategis.ic.gc.ca>.

For additional referrals on consumer topics and questions, contact:
Reference Canada
Telephone: 1–800–667–3355

Information Sessions on Privacy Available for Legal Studies
(November 1998)

The Office of the Information and Privacy Commissioner is offering information sessions for senior high school students on issues surrounding privacy and the protection of privacy. The information sessions support introductory level courses in Legal Studies, as well as Social Studies 10 and Career and Life Management 20, and can address topics that include:

- the general nature of privacy and personal information
- who collects personal information
- how personal information is collected
- privacy and banking
- privacy and the Internet
- privacy and employment
- privacy and drivers' licences
- privacy and subscriptions/promotions.

From February to May 1999, the Commissioner's staff will be available to visit schools to provide 1-hour sessions on privacy. These sessions can be arranged to address topics on privacy that are relevant to your program.

For more information about the sessions, or to arrange a booking, contact:
Mary Golab
Office of the Information and Privacy Commissioner
Telephone: 780–422–6860
Fax: 780–422–5682

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Logistics

Support Available to Implement Logistics Strand *(January 1998)*

For more information about the Logistics strand, contact:
Michael Alpern
CTS Program Consultant
Telephone: 780–422–3272
Fax: 780–422–0576
Email: <malpern@edc.gov.ab.ca>.

To access classroom support and/or assistance with off-campus placements, contact:
Gary Palmer
Enterprise Performance Advantage Incorporated
Telephone: 403–949–2457
Fax: 403–949–2467
Email: <gary.palmer@epainc.com>

Logistics, one of the most recent CTS strands, represents a relatively new but fast growing career field. Logistics involves the movement of goods from producer to consumer. It is the integrating process that includes controlling, managing and operating the transportation of goods, including information.

Practitioners describe logistics as the process involved in getting the right product to the right place at the right time and at the right cost. In fact, logisticians say that just about everything people use, wear or consume in their daily lives is affected by logistics.

Support and assistance can be accessed to implement and deliver the 12 courses in the Logistics strand. A group of logistics professionals, many of whom are newly designated P. Log. (Professional Logistician) holders, have volunteered to assist teachers in implementing logistics courses. These logistics professionals will facilitate teacher access to classroom resource persons and student placements in off-campus logistics workplaces.

Sir Wilfrid Laurier Junior High School Explores Career Paths Logistically *(June 1998)*

For more information, contact:
Leslie Robertson or
Debbie Vance
Calgary Board of Education
Telephone: 403–294–6307

Students in Grade 9 at Sir Wilfrid Laurier Junior High School in Calgary have been able to increase their awareness of career options through an innovative offering in Logistics.

In order to provide students with real-life, practical experiences, courses from the Logistics strand were integrated with learning experiences in a work study program. The efforts of the Southern Alberta Logistics Society in finding local businesses to participate in the program were appreciated. Students were generally out in the workplace one afternoon each week, at which time they learned to apply theoretical knowledge gained in the classroom. Assistant Principal and teacher Leslie Robertson says, "It has been this on-the-job work experience that has enhanced the satisfaction and learning of the students in Logistics."

The culminating celebration for Logistics students was an employee luncheon, where each student provided a brief summary of the logistical aspects of the organization or company for which they had worked over the past school year. Partner organizations and companies in Calgary that were instrumental to the success of this program included: the Calgary Board of Education, Hi-Tech Assembly Systems, Computing Devices Canada Ltd., Petro-Canada, Calgary Regional Health Authority, 7-Eleven Food Stores and Arrow Auto Body Ltd.

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Calgary Board of Education and the Southern Alberta Logistics Society
(February 1997)

For more information, contact:
Steve Makowski
Telephone: 403–294–8774
Fax: 403–294–6301
Email: <slmakowski@cbe.ab.ca>

The Calgary Board of Education collaborated with members of an industry focus group, formed to provide a bridge between industry and education, to implement courses in the new Logistics strand for the 1997–1998 school year.

Logistics is the group of services concerned with the effective movement of materials and information from their source to the point of consumption. The Southern Alberta Logistics Society predicts that between 85 000 to 90 000 additional people will be required in Calgary in this field within the next 10 years.

Students interested in attending post-secondary institutions will be able to obtain courses from the University of Calgary, the Southern Alberta Institute of Technology or the DeVry Institute of Technology. Employment opportunities in logistics range from the office of the CEO to the warehouse floor, allowing for a broad range of students to participate.

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Management and Marketing

Students at Lester B. Pearson Attend Global Visions Conference
(November 1998)

For more information, contact:
Susan de Wijk
Lester B. Pearson High School
Telephone: 403–280–6565
Fax: 403–777–7158
Email: <sldewijk@cbe.ab.ca>

Global Visions is a nonprofit organization dedicated to educating young Canadians about the global marketplace and providing them with the skills to succeed in international business, in developed and developing economies. Six Management and Marketing students from Lester B. Pearson High School in Calgary attended the Global Visions Conference held at the University of Calgary on May 13–15, 1998. It was an intensive but enjoyable learning experience for all the students. Outcomes of this conference align perfectly with the Management and Marketing course, MAM3030: Business in the Global Marketplace.

Throughout the conference, local business people talked with students about their experiences in the global marketplace. Representatives from Nova and Renaissance Resources talked about global opportunities in the oil and gas sector. The President of the University of Calgary discussed the university's role as a major player in the global educational sector. The President of the Alberta Stock Exchange discussed global opportunities in the financial sector. Dr. Tom Keenan, past Team Canada Trade Mission Representative, discussed global opportunities in the technology sector. Representatives of the International Trade Centre talked to students about the diversity of doing business in the global marketplace.

Students worked in teams on a case study and presented their perspectives to a professor in the Faculty of Management. They were encouraged to start building a network of contacts in the business community. Students attending this conference were also eligible to submit an essay on a particular growth sector in Alberta and compete for a spot on the Junior Team Canada Trade Mission. In the summer of 1998, the Junior Team Canada Trade Mission went to Thailand and Singapore. Many thanks to Mr. Terry Clifford, Chairman, and Amy Giroux, Director of Global Visions, for planning and organizing this conference.

Agribusiness Scholarship Links with Management and Marketing
(November 1998)

For more information, or to obtain posters and application forms, contact:
Monsanto Canada Incorporated
Telephone: 905–814–2499
Fax: 905–826–4278

Monsanto Canada Incorporated is once again offering the Monsanto Agribusiness Scholarship to graduating high school students. This scholarship program is intended to assist graduating students wishing to pursue a college or university education. A total of fifty $1000 scholarships will be made available to graduating students in the provinces of Alberta, Saskatchewan, Manitoba, Ontario and Quebec.

Eligible students must be high school graduates from a farm family who are commencing a degree or diploma program in agriculture, agriscience or management at a Canadian university or college in the fall 1999 session. Selection of applicants will be based on academic standards, demonstrated leadership in the community, and university or college acceptance.

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Junior Achievement Student Venture Program (*November 1998*)

For more information about Junior Achievement Student Ventures, contact:
Cathy Millar
Manager, High School Programs
Junior Achievement of Southern Alberta
Telephone: 403–237–5252 ext. 4
Fax: 403–261–6988
Email: <cathym@telusplanet.net>
OR
Justin Dahlen
President and CEO
Junior Achievement of Northern Alberta and Northwest Territories
Telephone: 780–428–1421
Fax: 780–428–1031

Students in Management and Marketing at Lester B. Pearson High School in Calgary have won the Canadian Imperial Bank of Commerce (CIBC) Student Venture of the Year Award for the province of Alberta. Their venture, called Candle Scentsations, mass-produced votive candles in a variety of colours and scents. Students submitted an impressive entry, which included their corporate minute book, business plan and annual report. This is the second year in a row that Management and Marketing students at Lester B. Pearson High School have won this award.

This award represents outstanding achievement in the Junior Achievement Student Venture Program, sponsored by CIBC across the province of Alberta. Students experience the risks and rewards of entrepreneurship, by starting, operating and liquidating a classroom-based business enterprise. As a class, students decide to produce a product or provide a service. They capitalize, operate and track the financial performance of their venture. Congratulations to students at Lester B. Pearson High School!

Junior Achievement CAPS Competition for Grade 9 Students

For more information about the Junior Achievement CAPS Competition, contact:
Fiona Zawadzki
Middle School Programs
Junior Achievement of Southern Alberta
Telephone: 403–237–5252 ext. 7
Fax: 403–261–6988
Email: <fiona@telusplanet.net>

Junior Achievement of Southern Alberta introduced the first Canadian CAPS competition in December 1998 and the results are in.

Placing first out of 118 teams was "Ambrosia" from Branton Junior High School in Calgary. Their total profit after running their baseball cap company for four weeks was $1484. Good work, team! Congratulations to the students, teacher and volunteer business consultant from Canada Trust.

The CAPS Management Simulation is the highlight of the new and improved Junior Achievement Project Business in-school program for Grade 9 students. CAPS enables teams of students to manage their own baseball cap company. Competing against other companies, the students make decisions on price, production and inventory. The computer simulation provides the results and profit reports. The secret of success in this business simulation is to balance supply and demand.

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Mechanics

Articulation Agreement: Buffalo Trail and Lakeland College
(February 1997)

For more information, contact:
Doug Coffin
Deputy Superintendent
Buffalo Trail Regional Division No. 28
Telephone: 780–842–6144
Fax: 780–842–3255
Email: <dougcoff@btrd.ab.ca>

Buffalo Trail Regional Division No. 28 and Lakeland College have joined together to offer Mechanics courses throughout the region. A number of schools are participating in the program: Irma School, Mannville School, J.R. Robson School, E.H. Walter School, Wainwright High School and Edgerton Public School.

Students are enrolled in a 3-credit Mechanics course; the theory section is taught in the classroom, while the practical section is taught in the lab at Lakeland College. The days spent at Lakeland College are scheduled for Professional Development days, when the schools are closed, so students miss as few of their regular classes as possible.

Included are three 1-credit courses: MEC1020: Vehicle Service & Care, MEC2020: Vehicle Maintenance and MEC3010: Buying & Selling Vehicles.

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Tourism Studies

Customer Service Excellence Program
(June 1997)

For more information, contact:
Jennifer Kluthe
Telephone: 780–423–9230
Fax: 780–422–3430

OR

ATEC
12th Floor Sterling Place
9940 – 106 Street
Edmonton, AB, Canada
T5K 2N2
Toll Free: 1–800–265–1283
Email: <jenniferk@atec.ca>

The next teacher inservice will be held in the fall of 1999. Seminar locations will be determined according to registration.

The SERVICE BEST™ (formerly ALBERTA BEST™) Customer Service Excellence Program is an industry-recognized certificate program available to teachers to support the delivery of the Tourism Studies course, TOU1030: Quality Guest Service. Through video clips, group discussion and small group exercises, students will learn to:

- identify Alberta's tourism destination regions
- recognize and respond to the needs of customers
- assess factors that can "wow" customers
- persuade upset customers to become loyal customers
- recognize the importance of nonverbal communication
- appreciate the power of a positive attitude on the job.

In the seven years that SERVICE BEST™ has been available, it has trained more than 50 000 clients. As of March 1999, more than 150 teachers have been trained to deliver the program. The certificate may provide students with a significant hiring advantage when they have little or no work experience to offer an employer.

Schools wishing to offer SERVICE BEST™ to their students may do so by paying an annual licence fee. In addition to purchasing an annual school licence, teachers wishing to deliver the program must pay to attend a two-day inservice. Teachers receive the staff participant manual, leader's guide, overhead transparencies, videotapes, posters and numerous other resources to assist in delivering the program to their students.

Once a school has purchased its annual licence, and the teacher has attended the two-day inservice, student materials can be ordered from the Alberta Tourism Education Council (ATEC) at a reduced cost. The cost includes a participant manual, SERVICE BEST™ certificate and pin.

Note: SERVICE BEST™ is a copyright program and cannot be taught to students without purchasing the original manuals for each student. This ensures that each student receives a certificate and pin, and that his or her name is registered in the ATEC database.

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Alberta Tourism Education Council (ATEC)
(June 1998)

For more information on ATEC:
Telephone: 780–423–9225
Toll Free: 1–800–265–1283
Fax: 780–437–6655
Email: <info@atec.ca>

To order resources, contact:
Grant Wrightson
Marketing Coordinator
Telephone: 780–423–9227
Fax: 780–437–6655
Email: <grantw@atec.ca>

The Alberta Tourism Education Council (ATEC) and the Canadian Tourism Human Resource Council have made the following resources available to schools:

- *The Student's Travel Map: A Guide to Tourism Careers, Education and Training*—contains examples of occupations found within each sector of the tourism industry, as well as a comprehensive listing of tourism-related programs offered by post-secondary schools in Canada
- an interactive CDROM, *Tourism: A World of Opportunity*—parallels the guide and gives the user an opportunity to explore tourism careers in an interactive environment.

In September 1998, ATEC introduced a new national tourism career awareness program, "You Decide How Far To Go." Tourism industry professionals volunteer their time to conduct presentations on career opportunities in tourism.

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Wildlife

Alberta Conservation Education Programs Are Privatized
(October 1996)

For more information, contact:
Dave Paplawski
Program Coordinator
Alberta Conservation Education
Telephone: 780–466–6682
Fax: 780–431–2871

A number of Alberta Conservation Education Programs, including the Alberta Conservation and Hunter Education Program, the Alberta Fishing Education Program, Project WILD and the Outdoor Camp Program, support the delivery of courses in the Forestry and Wildlife strands. These programs, formerly sponsored by Fish and Wildlife Services, have become privatized. Now, each of these programs and their related materials are made available at a small cost through the W.I.S.E. Foundation, a nonprofit organization committed to conservation education.

Internet Resources for Wildlife Courses
(January 1998)

Forward comments and questions regarding the use of this site to Jeff Meadows, University of Lethbridge, email <jeff.meadows@uleth.ca>.

The University of Lethbridge, Center for the Investigation of Computer Communication Technology in Education (CICCTE), and Parks Canada have recently developed a web site. The site is designed to be an online resource for teachers and students that links Wildlife courses with relevant information available through the Parks Canada web site.

Teachers are encouraged to visit this site at <http://www.edu.uleth.ca/CTS_wildlife/> and explore its potential for use in delivering Wildlife courses. The site was designed and is maintained by students in the Faculty of Education at the University of Lethbridge. Your comments and questions regarding this site are encouraged in order to help make the site as user-friendly and useful as possible.

FEESA Offers Inservice Opportunities for Teachers
(February 1997)

To obtain a copy of FEESA's 1996–97 *Professional Development Guide* or *Resource Guide*, contact:
FEESA, An Environmental Education Society
Telephone: 780–421–1497
Fax: 780–425–4506
Email: <feesa@telusplanet.net>

FEESA, An Environmental Education Society offers a number of professional development opportunities for teachers that focus attention on Alberta's environment and natural resources. These programs will be of particular interest to teachers implementing courses in Agriculture, Energy and Mines, Forestry and Wildlife.

Each FEESA program emphasizes a bias-balanced approach and strives to reflect the diversity of views and values held by Albertans with regard to environmental issues. The programs are offered through the joint efforts of FEESA and various government, industry and environmental organizations, and include EcoLabs, EcoTours and summer institutes.

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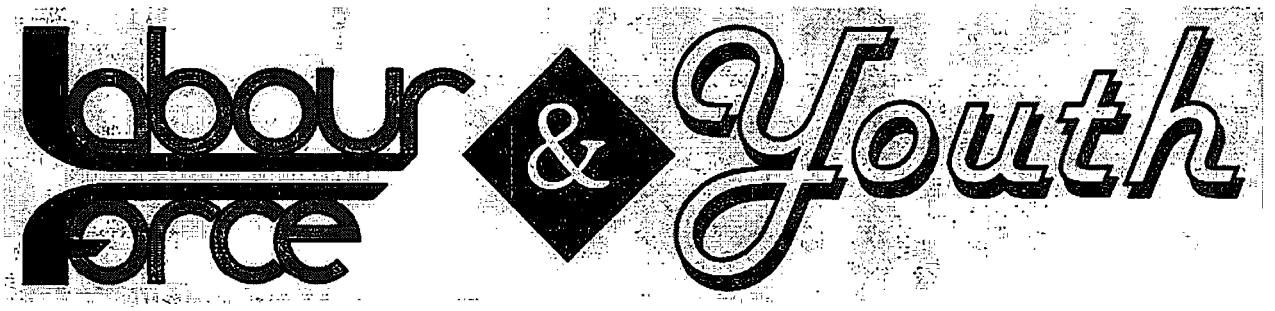

- Alberta's youth have always been active in the labour market. Their labour force participation rate remains one of the highest among the provinces.
- Along with economic growth in Alberta, youth employment has been rising steadily during the last four years. In September 1998, youth employment increased by 12,400 or 5.2% from a year ago.
- Alberta's youth unemployment rate is one of the lowest in Canada. In September 1998, the jobless rate among youth stood at 11.4%, behind Manitoba and Saskatchewan.
- At 15.9% in September 1998, the unemployment rate for those aged 15-19 remains the highest among all age groups in Alberta. This is a reflection of this age group's low level of educational attainment and limited work experience.

Labour Force Statistics, Youth, Alberta

		15-24			15-19			20-24		
		Total	Male	Female	Total	Male	Female	Total	Male	Female
Working Age Population	1994	378.1	191.2	186.9	184.7	94.2	90.5	193.4	97.0	96.4
x1000	1995	377.9	191.4	186.5	187.9	95.9	92.0	189.9	95.5	94.5
	1996	383.5	195.8	187.8	192.3	98.5	93.8	191.3	97.3	93.9
	1997	395.5	202.0	193.5	198.6	101.7	97.0	196.9	100.4	96.5
Labour Force	1994	259.6	135.0	124.6	102.5	53.6	48.8	157.1	81.4	75.7
x1000	1995	262.2	137.7	124.5	106.9	55.5	51.5	155.2	82.2	73.0
	1996	264.4	140.1	124.3	108.1	58.1	50.0	156.3	82.0	74.3
= Employed + Unemployed	1997	270.2	143.3	127.0	112.1	58.6	53.4	158.2	84.6	73.6
Participation Rate	1994	68.7	70.6	66.7	55.5	56.9	53.9	81.2	83.9	78.5
%	1995	69.4	71.9	66.7	56.9	57.8	55.9	81.7	86.1	77.3
	1996	68.9	71.6	66.2	56.2	59.0	53.3	81.7	84.2	79.1
= Labour Force / Working Age Pop.	1997	68.3	70.9	65.6	56.4	57.7	55.1	80.3	84.3	76.2
Employed	1994	225.7	116.9	108.8	86.6	44.9	41.8	139.1	72.0	67.0
x1000	1995	229.3	119.7	109.6	89.7	46.3	43.3	139.6	73.4	66.3
	1996	232.1	122.7	109.5	91.2	49.1	42.1	140.9	73.6	67.4
	1997	239.3	125.8	113.6	93.4	48.1	45.3	146.0	77.6	68.3
Employment Rate	1994	59.7	61.1	58.2	46.9	47.7	46.2	71.9	74.2	69.5
%	1995	60.7	62.6	58.8	47.7	48.3	47.1	73.5	76.8	70.1
	1996	60.5	62.7	58.3	47.4	49.8	44.9	73.7	75.6	71.7
= Employed / Working Age Pop.	1997	60.5	62.2	58.7	47.0	47.3	46.7	74.1	77.3	70.8
Unemployed	1994	33.8	18.1	15.8	15.8	8.8	7.1	18.0	9.3	8.7
x1000	1995	32.8	18.0	14.9	17.3	9.1	8.1	15.6	8.8	6.8
	1996	32.3	17.5	14.8	16.9	9.1	7.8	15.4	8.4	6.9
	1997	30.9	17.5	13.4	18.7	10.5	8.2	12.2	7.0	5.2
Unemployment Rate	1994	13.0	13.4	12.7	15.4	16.4	14.5	11.5	11.4	11.5
%	1995	12.5	13.1	11.9	16.1	16.5	15.8	10.0	10.7	9.3
	1996	12.2	12.5	11.9	15.6	15.6	15.7	9.8	10.2	9.4
= Unemployed / Labour Force	1997	11.4	12.2	10.5	16.7	18.0	15.3	7.7	8.3	7.1

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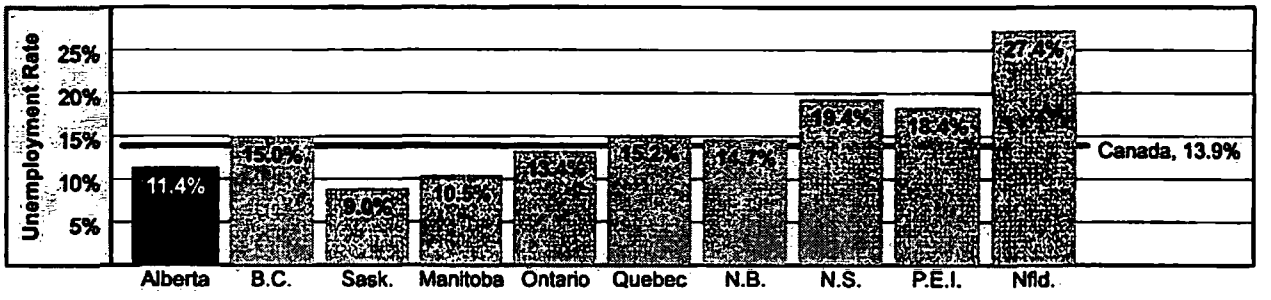
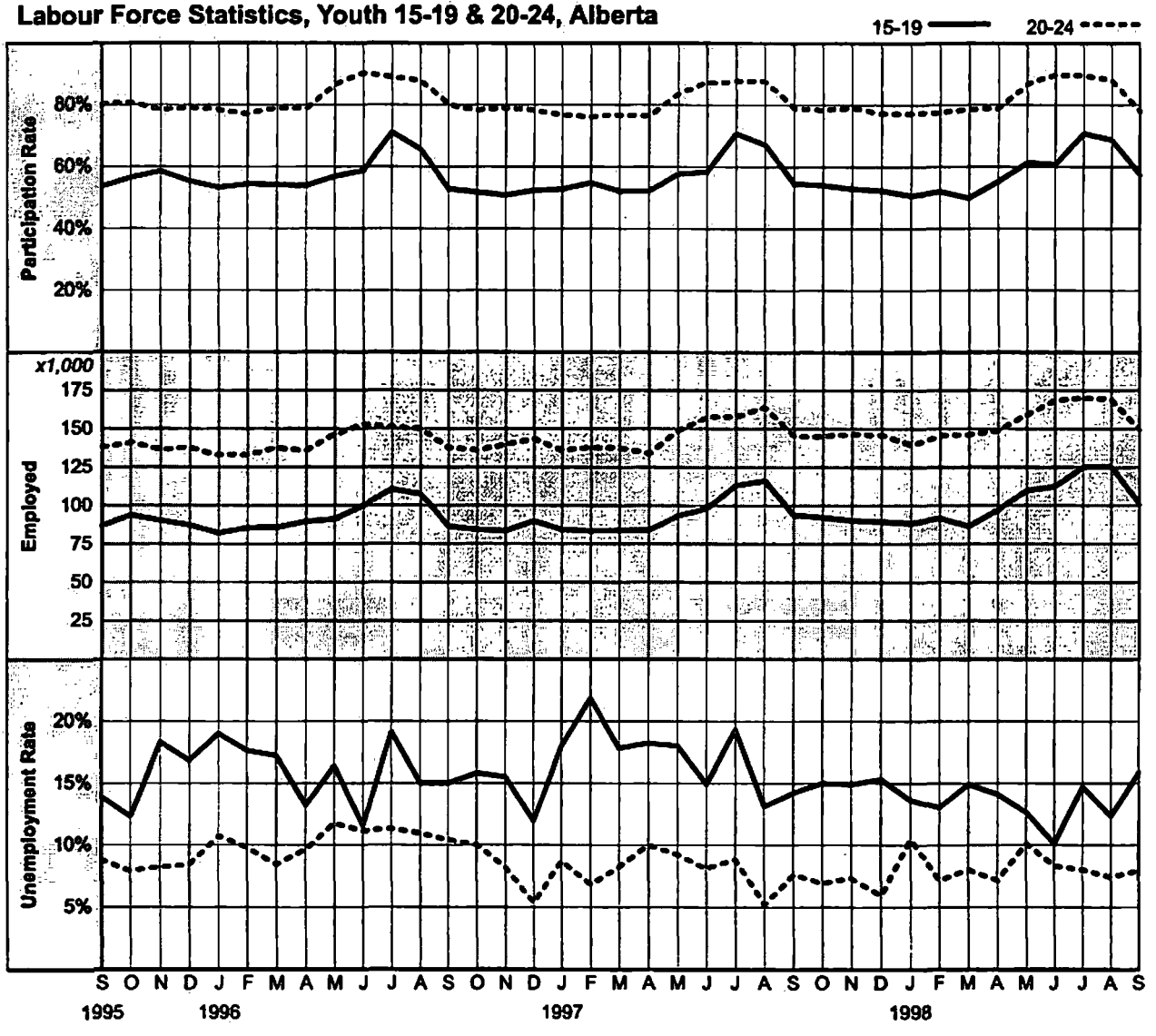
Unemployment Rate, Youth 15-24, Canada & Provinces, September 1998



Labour Force Statistics, Youth 15-19 & 20-24, Alberta



Prepared by: Alberta ADVANCED EDUCATION AND CAREER DEVELOPMENT

Source: Statistics Canada Labour Force Survey

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